

AUTOMATIC TELLER MACHINES (ATMs) MANAGEMENT

CROSS REFERENCE TO RELATED APPLICATIONS

1 This application takes priority from Provisional Applications Ser. Nos. 60/255,985 filed Dec.15, 2000 and 60/291,864 filed May 18, 2001, the disclosures of which are incorporated herein by reference as though set out at length herein.

FIELD AND BACKGROUND OF THE INVENTION

2 This invention relates generally to transactions and services management and more particularly to managing all aspects of the operation of automatic teller machines (ATMs).

3 ATMs include but are not limited to cash dispensing machines deployed by banks and other proprietors that allow customers to identify themselves via a bank card or credit card, and obtain cash for a charge to their account. ATMs were used initially to provide cash dispensing services to customers during non-banking hours and/or at locations of convenience. ATMs have generally been a cost center to banks that offer the service in order to attract and retain customers.

4 The term "ATM" as used herein includes (unless otherwise indicated for a narrower usage in specific instances) the familiar deployed cash dispensing terminals found in bank branch lobbies and also in secure remote locations rented by banks and the underlying infrastructure for servicing such terminals. It also includes similar terminals placed in stores and kiosks. It also includes terminals and infrastructure with other functions such as point-of-sale (POS) terminals, scrip machines and other analogs or extensions of the cash dispensing ATM concept as now known or hereafter revised or supplemented.

5 Scrip machines are a special kind of ATM that operate in a similar fashion to cash dispensing machines but are cashless, issuing a paper chit that can be taken to the merchant's counter to be exchanged for cash; they eliminate an expensive component of ATMs, the "rental" of cash in the machine. Also, the machine itself is less costly because it is not required to be a secure cash dispenser.

6 Cash dispensing ATMs were originally installed by banks to allow their own customers to conduct certain limited transactions 24 hours per day. These original ATMs were

cost centers with no income generation potential. This surcharging for an ATM cash dispensing transaction was first allowed in the United States in 1996. Banks immediately began to charge from \$1.00 to \$3.00 for a withdrawal transaction to ATM users who were not customers of the bank owning the ATM. Transaction surcharging has been allowed in foreign countries for many years. In addition, the cost of the ATMs themselves dropped substantially as ATM manufacturers introduced newer models. The combination of transaction surcharging and lower cost ATMs enabled the ATM business to become a profit center. Many banks and Independent Service Organizations (ISOs) have placed ATMs at many locations thought to support a reasonable number of daily transactions.

7 In addition to surcharge revenue, there is an emerging secondary market that offers owners of cash dispensing and scrip terminal ATMs additional revenue opportunities by, for example, surcharging customers for the dispensing of value-added non-cash items such as phone cards, stamps, and tickets of all kinds; issuing discount coupon receipts paid for by advertisers; using revenue producing preview movie clips or rolling advertisements playing on a full color monitor while the customer is waiting for his or her cash receipt or other transaction fulfillment; or negotiating eye-catching wrap-around advertisements to the outside of the unit for major consumer products.

8 Banks deploy on- and off-premise ATMs. On-premise ATMs are in or near bank branches and are usually connected to the bank's own private communications network. The entire cost of operation and collection of transaction surcharge fees is usually kept within bank accounting procedures. Off-premise ATMs are in public and private locations. They frequently use a dial-up phone connection to conduct a transaction, and involve many more parties in the operation and revenue sharing associated with the ATM. These off-premise ATMs are also owned and managed by ISOs who can profit from surcharge fees per transaction. Off-premise ATMs are by far the fastest growing sector of the ATM market.

9 Scrip terminals are placed in off-premise locations by ISOs. Scrip terminals have long been available but are becoming more popular because of their general utility and low cost. Banks, however, are generally not interested in deploying scrip terminals because they do not provide a direct benefit to bank customers.

10 At this time, there are approximately 350,000 ATMs installed in the U.S., with over 150 million ATM cards issued by American banks. Approximately, 50,000 new ATMs are

expected to be installed each year. In the U.S. there were over 12 billion ATM transactions in 1999. These transactions yielded approximately \$4 billion in customer surcharge fees and approximately \$1.5 billion in interchange fees between the card issuers and transaction acquirers involved. Similar numbers apply to the ATM market outside of the U.S.

11 The rapid deployment of ATMs throughout the U.S. and worldwide has created a substantial management and operational challenge for the companies that own them. For a proprietor, placing ATMs requires negotiation of terms and conditions with many partners (for cash cost, merchant site fees, armored car delivery services, maintenance contracts, and many more). These partners frequently share in the ATM surcharge and interchange fee income stream. Further, the current information exchange for all aspects of the business among the ATM owners, cash suppliers, transaction processors and armored car cash delivery services is largely paper-based (versus electronic), labor-intensive and error-prone.

12 While the processing of individual card transactions (e.g. authorizing and clearing the transaction) is reliably and securely handled by today's on-line transaction processing companies, the cost control and management of the ATM and scrip terminal business could be far more efficient. Problem areas include cash management, cash accounting, service management, contract terms and dates, fee management, and profit management which are all handled in a mostly manual environment today.

13 Most cash dispensing ATMs in the U.S. dispense from \$30,000 to \$300,000 of cash each month. All of this cash must be recovered from individual credit or debit accounts that may be located anywhere in the world, accounted for and returned to the appropriate cash providers, and eventually replaced in the ATM. There are billions of dollars of fees generated in this process. These fees come in the form of surcharges and interchange fees. The surcharge fees are disclosed to and paid by the consumer, typically whenever the consumer uses any ATM other than those of his own bank and requests a cash withdrawal. The surcharge fee is usually around \$1.50/transaction. Interchange fees are invisible to the consumer and are credited to the owner of the ATM that acquired the transaction and paid by the bank that issued the card that was used to conduct the transaction. Interchange fees are usually around \$0.50/transaction and are frequently shared among the various parties involved in conducting the transaction, such as the transaction processor, the network processor and the ATM owner. Thus, there is usually a total of about \$2.00 of revenue available from most cash withdrawal transactions.

14 Profits from ATMs can be substantial. Poor management controls, however, can diminish or eliminate this potential. Operational costs of terminals in low transaction sites or expensive service areas may exceed the fees they generate. In addition, terminal downtime, running out of cash, ordering too much cash, and paying for too many armored car visits are all inefficiencies that increase costs and reduce profits. In addition, each owner of an off-premise terminal location must negotiate site fees, equipment leases, maintenance contracts, commissions, pay state or local taxes or fees, and the like. Properly negotiating and managing these costs to generate a profit against the expected income from surcharge and interchange fees requires a range of data that is both difficult to find and hard to interpret.

15 This profit challenge is very difficult to overcome without a software solution specifically designed to provide visibility into and manage the entire business surrounding ATM and scrip terminal installations. While detailed transaction data is captured from each transaction by the transaction processor that executes the transaction in real time, few terminal owners or partners know how to download that transaction data and make use of it in the management of their businesses.

16 Banks that provide the cash for ATMs have discovered that renting cash to ATMs is an innovative and safe way to generate fees without incurring the risk of actual loans because the cash is insured and bonded at every step. Many cash providers use "vault cash" which counts as part of their federally required "cash on hand" and is not otherwise available for loan activity. Tracking this cash is a complex process because the cash may be in any of several places: in an ATM, in an armored car, in the armored car company's vault, in a federal reserve bank account, in a correspondent bank account, "in transit" to or from the ATM, or back at the cash provider's own bank. Even a small cash provider may have upwards of \$10 million spread among the locations in the ATM loop just described. All this cash must be reconciled daily – a formidable challenge. Further, the generation of fees for the cash provider requires the calculation of interest based on whatever formula the cash provider is using.

17 Each ATM, each day, must be tracked to monitor its transaction levels, how much cash it dispensed, and whether there are any problems requiring service. Most of the cash in ATMs originates with a "cash provider" who charges a fee to the ATM owner (some ATMs get their cash from the local merchant). The cash is delivered to the ATM by an armored car service at considerable expense. The delivery may also include some maintenance such as the

replacement of printer ribbons, clearing of cash jams, and other routine maintenance. The costs for these services and for the cash are determined for each ATM location by contracts which may be different at each site.

18 Other regular costs associated with the operation of ATMs and scrip terminals are site fees, maintenance fees, insurance costs, commissions, advertising costs, telephone line costs, and many more. The computation of these costs depends upon many factors, and must be calculated for each accounting period. Each party to these costs must be either invoiced or paid periodically for its share of the operation.

19 Managing ATMs is a complex, error-prone task that is done at most small and intermediate organizations by manual record keeping and/or the maintenance of multiple spreadsheets.

20 There are about 8,000 scrip terminals installed in the U.S. today, mostly in the Midwest and South. The growth of scrip terminals has been limited by the major network processors demanding that scrip transactions be treated as point-of-sale (POS) transactions, and refusing to allow imposition of surcharging fees on POS transactions. This practice is being contested by the regional processors that drive the scrip terminals, and the owners of the terminals who want to collect these fees, and which they are legally allowed to collect. Should scrip terminal transactions be treated as normal ATM transactions and therefore subject to surcharge fees, the growth of scrip terminals would be tremendous because of their lower acquisition cost and operating cost compared to ATMs.

21 There is reason to believe that the network processors will reconsider their position on the treatment of scrip terminal transactions because they might share in the fees charged if they were treated as ATM transactions instead of POS transactions. Even without this change, merchants can still charge their own surcharge fees on a scrip transaction by assessing the surcharge at the time of money exchange at the counter.

22 It remains desirable to have a comprehensive business system to manage the operation of ATMs, pass information among the parties in a standard format, determine the amount of revenue from multiple sources, account for the revenue sharing among the parties involved, and compute the profitability of each ATM and partner in the aggregation.

23 It is an object of the present invention to provide a method and apparatus to comprehensively manage the operation of ATMs, including cash and scrip terminals and other

cash and value dispensing dispersed public access terminals, and the supporting network and automated management arrangement.

24 It is a further object of the invention to enable the user to capture in one system as useful data, and use of the data to direct, all aspects of ATM and ATM network management including assets distribution, configuration management, events.

25 It is a still further object of the invention to provide autonomy of the respective functions ATM cash authorization and ATM management networks.

26 It is another object of the present invention to provide a method and apparatus to encompass operational tasks such as determining the amount of revenue from multiple sources and to determine the shared revenue among a plurality of participating parties.

27 It is another object of the present invention to provide a method and apparatus to provide visibility into the management of ATMs.

28 It is another object of the present invention to provide a method and apparatus to increase the efficiency of ATM operation and of ATM networks and the like.

29 It is another object of the present invention to provide a method and apparatus to reconcile and manage ATM cash in order to generate a maximum of fees at minimum cost to attain maximum profitability.

SUMMARY OF THE INVENTION

30 The above and other objects of the invention are met and problems of managing ATMs are solved by the present invention through provision of an ATM management system comprising a unique data structure of a relational database coupled with ATM management processing functions that include software based business operation, accounting and management and other business processes and procedures to deployers of ATMs.

31 A first preferred embodiment of the invention is a private or corporate network operating with fed-in daily transaction files from a cash authorization system. The ATM management system and cash authorization are operated in parallel by respective proprietors.

32 Other embodiments include, but are not limited to, private electrical and optical telecommunications connected systems of wired and wireless types and other communications forms and mobile terminals. These can include wide area network linkages and/or real time data feeds of cash authorization.

33 The invention assists terminal deployers by providing cash management, contractual terms and conditions management, income and expense management and overall operational visibility.

34 The invention includes a software solution providing visibility into and managing the entire business surrounding ATM installations. While detailed transaction data is captured from each transaction by the transaction processor that executes the transaction in real time, few terminal owners or partners know how to download that transaction data from a range of processors and make use of it in the management of their business. The invention overcomes that problem. The present invention uses this information to more efficiently manage ATMs.

35 The ATM management system of the invention comprises five areas of functionality that can be parsed into five modules (or other number of modules), explained for cash dispensing ATMs as a non-limiting illustration of practice of the invention, as follows:

ATM Information File (AIF) Module

36 An ATM Information File (AIF) module builds and manages all acquisition, configuration, asset management and disposition aspects of each terminal. Configuration data includes all hardware, software and communication components of each terminal, vendor and user supplied options, contents and purpose of each dispenser in the terminal, warranty and service contract data, all signage options, and tracking of all upgrades of upgrades to any of these items. The AIF is integrated with other modules in that it supplies the necessary and appropriate terminal information to each integrated module,

Terminal Locations (TL) Module:

37 A second module builds and manages all Terminal Location (TL) data. Daily activity transaction (Txn) records are collected and recorded in the Terminal Location (TL) module in conjunction with the AIF module described above for extensive review and computations. Terminals can also be combined into various groups for reporting and analysis purposes. This module will rank the terminals in order by many criteria such as transaction counts and withdrawal amounts.

Terms and Accounting Module:

38 The Terms and Accounting module builds and manages a database of contract terms between the user organization and all its arrangements, agreements and/or contractual commitments with various partners for each terminal. This module is then able to compute the

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income and expense for each partner for each accounting period (e.g. month) and produce an accounting statement to accompany either a bill or check to the partner. This module will also build an operating statement for and compute the profitability of each terminal, month by month, and rank the terminals in order by profitability.

Cash Management Module:

39 The Cash Management Module builds and manages a database of cash orders and replenishments for each terminal. This module keeps track of a cash balance for each terminal for which the user manages cash, forecasts when to order new cash, produces cash orders, and posts the results of cash replenishments when a delivery confirmation is received. This module then allows various analyses of the cash management operation such as total cash exposure to a given partner and the average cost of cash at a given terminal.

Event Management Module:

40 An Event Management Module builds and manages a database of terminal "events". This module also provides the ability to track supply orders for terminals. This module also provides the user with the ability to define event types and monitor those events (i.e., maintenance calls, insurance issues, ownership changes, etc.). The system can support any number of categories or event types.

41 Taken together, the five modules of the system provide the user with a comprehensive single-source terminal management program. This system allows the user to monitor the level of activity of all terminals, track individual and total costs, assess terminal profitability, and manage terminal cash.

42 The present invention together with the above and other objects, features and advantages thereof may best be understood from the following detailed description of the embodiments of the invention illustrated in the drawing, wherein:

BRIEF DESCRIPTION OF THE DRAWING

43 FIG. 1 is an outline of database design for implementing the system of the invention according to a preferred embodiment thereof;

44 FIG. 2 is a block diagram of hardware relations among users of the invention;
and

45 FIGS. 3, 4, et seq. are typical screen displays seen in utilization of the FIG. 1-2 embodiment.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

46 Referring now to FIG. 1, there is shown a database design for a system of ATMs management according to a preferred embodiment of the invention relating certain entities and actions of a managed ATM deployment to each other, i.e. AIF as described above 10A, and terminals (TLs), i.e. ATMs, 10B, cash dispenser 10C, ATM Groups 12, Partners 14, Partner Groups 16, Events 18, Partner Cash Accounts 20, Cash Orders 22, Reports 24, Supply order 26 and Supply Items 28. The system also comprises Terms 32 (Profit and loss, P&L, definitions), Accounting 34 and Notes generator 36.

47 The independent networks also provide user card numbers in a report N2 (with financial institution identification, FIID) N3. These data can be put to use in the present system.

48 Cross reference (Xref) tables are provided including ATM Group Xref 121, Partner Group Xref 161. Optionally Settlement Float tables 30 and Settlement Float Xref 301 can be provided. Reports can be tied to a Report Schedule table 241. ATM tables can break out data to tables for TL Day 101, TL Cash Orders 102, Transaction and monthly totals 104, 105. Additional such modules or sub-modules are Cash Account (Day) 201, Cash Account Debit/Credit 202 and Cash Transfers Instructions 203. Supply Order and Supply Items generate a Supply Order items list 27.

49 FIG. 2 shows a layout of user locations of a central data file and server and deployed 'clients' for cooperating system users. This figure shows the relationships of the ATM management system of the invention (A) and the processing/authorization network (B). The latter provides daily or other periodic reports (not real time feeds in this embodiment). The system of the invention provides certain reports, cash orders and service orders as described below. The distinct barriers between A and B are important for privacy, business security, computer security and integrity of operation of the respective systems. Yet, a seamless cooperation is provided between them.

50 FIG. 3 is a typical main menu display for this embodiment providing launch options to the various functions (terminals, transactions activity, diverse terms and accounting that may apply, cash management function event management functions and utilities). A table of

fields of processing of the engine behind the FIG. 3 display and field description is given in Appendix A.

51 The Information Tab (FIG. 4, the same menu as FIG. 3 and the table next below in Appendix A with Information tab invoked) contains general, descriptive information on the ATM. (e.g., the model and telephone number of the ATM).

52 Terminal serial numbers may be required to be registered in the database before they can be entered on an ATM form. If this option has been set in the System Configuration, each serial number must be registered before use. If it is not set, then each new serial number entered in the Serial Number field on the ATM form will be added to the Master Serial Number list for the users. In either case, the system will ensure that a serial number is active in only one terminal at a time. (Please see the section on Terminal Registration below for further details.)

53 The status code table is user-defined. "Active" and "Closed" are used by the system and should not be changed. Additional codes may be defined. Terminals cannot be changed to a status of "Closed" unless they have a zero cash liability balance.

54 A Cash Management tab is provided (see FIG. 5A and at Appendix A) and it contains information that relates to ordering cash and cash deliveries. Much of the default data supplied on the Cash Order and Cash Load forms is derived from the information supplied on this tab. Cash Orders and Cash Loads are described in detail under the "Cash Management Module" section below.

55 A Cash Settlement tab (the display of which is represented in FIG. 5B and its fields are listed below) is provided which refers to the Settlement Float tables. These Float tables are related to interest charges and are used to indicate the delay between withdrawals at the ATM and final settlement of the funds at the Cash Supplier. Settlement Float tables are described in detail in the System Configurations section below.

56 An ATM's use of a Settlement table is based upon the entry (or lack thereof) of start and end dates. If an entry appears in the Start Date field for a Settlement table, the ATM will not make use of the table for transactions prior to that date. If the Start Date is left Null, the ATM uses the Settlement table from the earliest ATM transaction. If an entry appears in the End Date field, the ATM will not use the Settlement table for transactions after that date. If the End Date is left Null, the ATM applies the Settlement table to the latest ATM transaction.

57 A Replenishment tab (FIG. 5C and table at Appendix A below) contains information on the cash delivery company utilized by the ATM. The data that is entered into this tab should be based on what the delivery company can do. (e.g., the armored car company displayed below can replenish this ATM on a Bi-weekly schedule and the days they will deliver are Monday, Tuesday, Wednesday, Thursday and Friday.)

58 The replenishment segment and the replenishment days can be used to indicate the days that the armored car service is able to replenish the ATM, or can be used to indicate the users planned replenishment schedule independent of the armored car service's broader capacities.

59 A Warranty Tab (FIG. 5D and its table at Appendix A) documents the date the unit was shipped from the manufacturer, the manufacturer's warranty details, the date the unit was installed at the customer location, and the (perhaps) separate warranty that the user gives to the customer.

60 A Group tab (FIG. 5E and its table at Appendix A) contains the ATM Groups in which the ATM participates. ATM Groups are a way to collect any number of ATMs into a set for analysis or reporting purposes. An ATM Group may contain any number of ATMs, and an ATM may participate in any number of groups. ATM Groups are explained in detail later in this section.

61 ATMs participate in a Group based upon the entry (or lack thereof) of start and end dates. If an entry appears in the Start Date field for an ATM's participation on a Group, the ATM will not participate in the Group for transactions prior to that date. If the Start Date is left Null, the ATM participates in the Group from the earliest ATM transaction. If an entry appears in the End Date field for an ATM's participation on a Group, the ATM will not participate in the Group for transactions after that date. If the End Date is left Null, the ATM participates in the Group to the latest ATM transaction.

62 A User Fields tab (FIG. 5F and its table at Appendix A) is an area set up to store user-defined data items. This area is used to consistently maintain ATM-specific data that is not already part of the system Pro system. There are five categories of fields: numeric, currency, text, date, and checkbox. Each of these five categories has four fields available. The setup of User Fields is described in detail in the "System Configurations" section below.

63 A Notes tab (FIG. 5G and its table at Appendix A) is an area for ATM-specific notes. This area is used to record comments, changes or problems related to an ATM. Notes are entered on this form and displayed in reverse chronological order. The system is also equipped with a “tickler” process. If a future date is entered into the system under “Next Contact”, the system will display a reminder to the user on that date.

64 FIGS. 6A- 6F show the manner of adding new ATM terminals using a wizard feature. To add a new ATM terminal, click the Add Icon button in the header of the ATM form. The ATM Wizard will begin and prompt the users through the following screens. (NOTE: . Additional screens will appear if the user chooses Yes to “Will the users monitor cash for this ATM”? These screens follow.)

65 The user should complete as much of the information as possible in the ATM Terminals screen. Any data that is entered in this section of the database will be available in the form of defaults in other areas. This will assist in the streamlining of the data entry for the system.

66 The following additional screens (of FIGS. 6G, 6H, 6I) appear during the wizard process if “Yes” was selected for the answer to “Will the users monitor cash for this ATM”? on the first screen of the ATM Wizard:

67 Deleting an ATM terminal will remove the record from the database and all other records associated with it, including daily transaction history, agreement terms, monthly accounting terms and group associations. The delete operation is not reversible: it cannot be undone.

68 To delete an ATM terminal and other associated data records, the users find and display the ATM the users wish to delete. Click the Delete Icon button in the header of the ATM form. The users will receive a warning message giving the users the option to continue the deletion or cancel the delete process.

69 When users first enter ATM-related forms, all ATMs in the database are usually listed. As the users store more and more ATMs in the system, it may become more difficult to locate a particular ATM or a group of ATMs. On any system form, the users may use the standard Microsoft Access Edit/Find command menu option to search for certain values in certain fields in the upper section of the form. However, the system provides another more powerful search capability to locate ATMs of interest.

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70 The “Terminal ID” and “Location” drop-down boxes allow for quick searches. In addition to the “quick” search, there is also an expanded search and filter capability that can be accessed by pressing the binoculars button. When the binoculars button is pressed, a search criteria form is opened. This form is setup so that more than one item may be selected at any time. When more than one item is selected, the system will search for any terminals that match all the selected criteria. (e.g., if the first criteria selected is “Active” under “Status” and the second is “NY” under “State”, the system will find all ATMs that are active and located in New York.).

71 This form is also setup so that certain fields allow “Search Strings”. “Search Strings” are searches that allow wildcard characters in the search. The following table lists the wildcard characters supported and their meaning:

Char acter	Usage	Example
*	Matches any number of characters. It can be used as the first or last character in the character string.	wh* finds what, white and why
?	Matches any single alphabetic character	B?ll finds ball, bell and bill
[]	Matches any single character within the brackets	B[ae]ll finds ball and bell but not bill
!	Matches any character not in the brackets	b[!ae]ll finds bill and bull but not bell
-	Matches any one of a range of characters. The users must specify the range in ascending order (A to Z, not Z to A)	b[a-c]d finds bad, bbd, and bcd
#	Matches any single numeric character	1#3 finds 103, 113, 123

72 To search using the Search Criteria form one chooses the criteria for desired search patterns by following the guidelines above. After a user has chosen the appropriate criteria and clicked the “Search” button, the system will close the Search Criteria form and display the form from which the users launched the search. This “launch” form will only display the records that met the criteria of the user's search (use the navigation buttons at the bottom of the form to move from record to record.) To cancel the search and once again display all records, one clicks the “Show All Terminals” button.

73 To reset the criteria on the search criteria form, click the Reset button. All the fields on the form will return to the “_ALL” status. The users may also cancel/close the search criteria form and no filter will be applied.

74 Activity records reflecting the activity for each day must be captured for each ATM. These activity records can be entered into the system through the system import routines or they can be manually entered. The daily record(s) contains counts for several different types of transactions and amounts. Not all of these counts and amounts are available in every file from every processor. All information that is available from the processor is loaded into the daily activity records.

75 Processors cut off their collections of terminal transactions for settlement at a particular time of day, say 3:00 p.m. eastern standard time. Each processor may have a different cutoff time and procedure. Therefore, each processor’s daily file to be settled that night via ACH contains transactions from two calendar days: one set that occurred from perhaps midnight to 3:00 p.m. on the current day, and one set that in this example occurred after 3:00 p.m. the previous day. The system records the transactions to the actual day they occurred, but remembers their processor settlement day as well.

76 There are additional complications to this process involving adjustments. Processors occasionally send adjustment transactions for a previously reported day. There are also situations where a user may need to manually enter an adjustment. To handle these cases, the system tracks multiple collections of transaction records per ATM per day.

77 The tracking of ATM activity is now explained (see also sample server displays at FIGS. 7A-7E). The system tracks transaction activity by both the actual activity date and the settlement date. This allows the system to properly display all transaction activity that occurred at the terminal each day, even though the transactions are settled by the processor on more than one day. This is important in order to show that potentially important activity at an ATM did not occur on the date of the settlement, but on the afternoon of the previous day. Settlement reports are available that recollect ATM transactions to their settlement day.

78 The system will accept one collection of transaction records for each combination of activity date and settlement date and will notify the user of any duplication. In addition, The system will accept any number of adjustment records for each activity date and settlement date combination.

79 The following table illustrates this capability. An ATM could, for example, have the following activity records on file:

Terminal	Activity Date	Settlement Date	Adj	Explanation
RBS123	4/1/2000	4/1/2000		Txns that occurred on 4/1 and settled on 4/1
RBS123	4/1/2000	4/2/2000		Txns that occurred on 4/1 and settled on 4/2
RBS123	4/2/2000	4/2/2000		Txns that occurred on 4/2 and settled on 4/2
RBS123	4/2/2000	4/3/0000		Txns that occurred on 4/2 and settled on 4/3
RBS123	4/2/2000	4/3/2000	A	Adjustments for txns that occurred on 4/2 and settled on 4/3
RSB123	4/3/2000	4/3/2000		Txns that occurred on 4/3 and settled on 4/3

80 The system can now collect these records by either ATM activity date or by settlement date.

81 Daily files from processors may come to the users via a service provided by the processor (e.g. MPS MVision), via e-mail attachments, or some other method. These files should be downloaded into a folder bearing the name of the processor. The files should also be renamed to a name containing the date of the transactions (e.g. MPS20001225). Once captured in this fashion, the files may be imported into the system.

82 Users of the system should always import the daily detail files from processors when possible, rather than the daily summarized files. The system is able to collect more information from the detail files than is provided in the summarized files.

83 System import utility programs are used to avoid both the manual labor of data entry and the possibility of data entry errors. The "Import Daily Txns" button on the Main Switchboard launches the Import form:

84 There are four possible steps in the Import process, each of which is represented by a radio button on an import form.

Step 1: Capture Processor Daily Files

85 When the “Capture Processor Daily Files” button on the form is selected, another set of radio buttons will be displayed on the right. These radio buttons allow the users to select the type of processor file to be imported. Choose the file type that the users intend to import from the choices available and click the “Execute Import Step” button. A dialog box will appear to allow the users to locate the file the users wish to import. The default file locations for each file type are declared on the System Configuration screens. Once the users have pointed to the file, click the “Open” button and the file will be imported into the system Edit File. An optional report is available that will print the records that have been captured into the Edit File. This option can be set from the System Configuration screen.

86 The system Edit File is used to process imported daily transactions. Each imported file is placed in the Edit File. If there are records already in the Edit File, the additional file records are placed after these records. Records imported into the Edit File via one of the Processor Import Utilities are identified as being captured by a particular Import Utility in the source field. Any number of files may be imported into the Edit File. When the users choose, the users may post the records in the Edit File to the database.

Step 2: View Import Edit File

87 This radio button is available at any time to view the contents of the Edit File: The Edit File gives the users the opportunity to view and edit records prior to posting them to the system. Changes to an individual record can be made directly to this screen. In addition, new records can be manually added. The Edit File also allows the users to delete records. To delete, highlight the records by clicking on the gray box to the left and press the delete key.

Step 3: Print Import Edit File

88 A radio button is available to print the contents of the Edit File at any time. Note: the system can be set to print a list of the records that the import routine has added to the Edit File. The system can also be set to print a list of all records in the Edit File and the action that posting routine took on each. Both of these print options can be set in System Configuration on the “Parameters” tab.

Step 4: Post Edit File

89 Selecting this radio button and then clicking “Execute Import Step” processes each record in the Edit File. The posting routine matches the ID of records in the Edit File to the

Processor's ID field value in the ATM records. If a match is found, a check is made to see if a record with the same date already exists in the database.

90 If there is a record in the database with the same date, the user is asked whether to replace the existing data in the database with the Edit File data or skip the replacement process and proceed. If the record does not already exist, the Edit File record is added to the ATM's daily record list in the database. Such records are marked in the Edit File as "Skipped" or "Posted" respectively.

91 Some records may remain in the Edit File because their ID did not match a processor's ID in the database. These records are marked as "Not Posted." There may be cases where a proper ATM record had not been added to the database or the database contained an erroneous processor's ID. Once either one of these situations has been corrected, the Edit File may be posted again and some or all of the remaining records would then be posted and deleted from the Edit File. If the processor sent records in the file that are not of interest, the users should delete them from the Edit File.

92 A posting report is produced documenting the action taken on each record in the Edit File. Records that matched a terminal ID in the database are then deleted from the Edit File as they have either been posted or deliberately skipped due to a duplicate already on file.

93 As each new record is posted in the database, it causes various updates as necessary to fields such as the Cash Remaining in the ATM. New or modified transaction statistics and amounts are also posted into the monthly counts for the ATM. At the end of the posting run, all statistics and amounts in the system database should be accurate and in synchronization.

94 Note: The records in the Import Edit File may also be posted from a button on the View Import Edit File screen.

95 ATM stores the processor data for an ATM on a daily level so that processor changes that take place during a month will be reflected in settlement reports.

96 This feature requires the use of a special code in the Partner XID field (located on the "Partner" screen) for each processor used by the user's company. The following is a list of each Processor supported by the system and the corresponding code that must be placed in the XID field:

Processor File Type:

Partner XID Field Code:

ATME	ATME
ATMI	ATMI
CoreData	CoreData
Concord EPS	CncrdEPS
Concord EPS Spreadsheet	CncrdEPS
First Data (USPI)	1stData
Lynk Systems	Lynk
MoneyMaker (ACS)	MonyMakr
MPS	MPS
RBSA	RBSA
RBSA Daily Summary	RBSA
TNS	TNS
Universal Money	UnivMony
US Bank	USBank

97 If the import posting routine does not find one of the above codes, an error message is displayed and the posting routine is stopped. The user may then update the Processor XID data and run the import posting routine again.

98 To manually enter or update daily ATM records, one uses the Edit File. The Edit File can be accessed by clicking the “Import Daily Txns” button (main menu) and then choosing “View Import Edit File”.

99 The manual records can be entered directly into the Edit File. No changes will be entered into the system until the record is posted. Therefore, it is important to remember that all manual changes must be posted as described above. If the users enter corrected data for an ATM, settlement date, and activity date that is already on file, the users will be prompted to see whether the users wish to replace information on the database, to which the users may answer OK. This method is best when the users have data for several ATMs to add as all records can be added on one screen, subsequently posted, and a printed report can document the user's changes.

100 The system stores the processor data for an ATM on a daily level so that processor changes that take place during a month will be reflected in settlement reports. This requires the use of Processor XID codes as explained above. When manually entering a record in the Edit File, the appropriate XID code for the process must be typed into the “Source” field.

(This is done automatically by the system when files are imported.) If the source is left blank, an error message is displayed and the posting routine is stopped. The user may then update the source field and run the import posting routine again.

101 The Posting routine for the system does not allow duplicate entries into the system. The system checks each record prior to posting to see if that record already exists. If the record does exist, the user is given the option to either replace or skip the record.

102 If the user decides to replace the existing record, the system displays the following prompt: "Would You Like The System To Replace All Duplicate Records and Not Prompt For Each One?" If the user answers "Yes", the system replaces the duplicates without further prompting. If the user answers "No", the system will continue to prompt for each duplicate record.

103 If the user decides not to replace the existing record, the system displays the following prompt: "Would You Like the System to Skip All Duplicate Records and Not Prompt For Each One?" If the user answers "Yes", the system skips all duplicates without further prompting. If the user answers "No", the system will continue to prompt for each duplicate record.

104 It is very important to ensure that data is entered into the database for every day for every terminal that is active. Missing data of course cannot be included in the system calculations and projections, and therefore could lead to erroneous results. Do not assume that missing data means no activity. Investigate the reason for missing data, and either enter the values that were missing or enter a date record with zero values to confirm that no activity took place at the ATM that day.

105 The Audit Checks button provides several routines that notify the user of potential problematic data. This area of the system should be checked regularly in order to keep the database up to date and accurate.

106 Some processors do not report on certain days (e.g. Sunday). Daily records for which the transaction counts are known to be zero are automatically generated into the database. This applies especially to days for which the ATM was not accessible (e.g. the store was closed) or perhaps out of service. The existence of the daily records is very important because cash rental charges (interest charges) still must be computed for these days.

107 The system has an area where transactions can be viewed/monitored. To reach this section, either click “Daily Txns” from the ATM Terminals screen or click the “Daily Statistics” button from the “Transaction Activity” module on the main menu.

108 The ATM Daily Transaction Statistics screen has four tabs: Transaction Activity, Cash Orders and Loads, ATM Cash, and Cash Cost. The form also has a number of command buttons located in its header.

109 In addition, there is a “memo” area where facts about the ATM can be displayed. (e.g., a memo may indicate that an ATM is located at a store that is closed on Sundays.)

110 The Transaction Activity tab (FIG. 7A) shows the individual daily transaction summary records for each combination of Settlement Date and Activity Date. Additional adjustment records may be on file, indicated by an “A” in the Adj column. The following is an example of this tab:

111 The most efficient way to capture these records is to import daily files provided by the processors. The system offers import utility programs for many processors. For those ATMs for which daily processor file or import utility is not available, the daily activity records must be imported manually into the Import Edit File screen and then posted.

112 In addition to making changes via the Import Edit File, edits may also be made directly on the Transaction Activity tab. To make a change, simply overwrite the data that is currently in the record. (i.e., to change the W/D Txns from 8 to 9 above, replace the 8 with a 9 directly in the field).

Cash Orders and Loads:

113 The Cash Orders and Loads tab (FIG. 7B) shows each cash order on file for the ATM and the load/replenishment status of that order.

114 The ATM Cash tab (FIG. 7C) shows a day-by-day accounting of the cash remaining in the ATM, together with cash order and delivery information. Daily withdrawal amounts are shown. Two important values on this screen are the cash left with confirmed deliveries (i.e. after entering the armored car report of the delivery) and the cash left with unconfirmed deliveries (i.e. assuming that all cash ordered actually get delivered). The first value is used to alert the user that cash deliveries may be overdue.

115 The Cash Cost tab (FIG. 7D) shows the total withdrawal amounts for each ATM each day, the settlement delay days before the withdrawals stop costing interest charges, the cash

returns applied based on their assumed or specific deposit date, new cash charges, the net end of day cash balance, and the daily interest charge.

116 Cash orders are charged interest by the supplier from the time of the Cash Order Charge Date on each line of the order, which is usually a number of days prior to delivery at the ATM. This display shows the timing of these events in chart form.

117 When entering new daily data, The system always keeps an up-to-date account of ATM cash balances. Whenever a new daily record for an ATM is posted, The system automatically re-computes the daily and monthly balances for that ATM (computing monthly ATM activity is explained in the next section). This recalculation takes place for each record posted via the Import Edit File and any records edited using the Transaction Activity tab.

118 Daily activity records are accumulated or “rolled up” into monthly counts after each Edit File posting run. These monthly records are available by clicking on the Monthly Statistics button (see FIG. 7E) in the Terminals and Txn Activity.

119 Monthly accounting computations are usually based on the monthly records, not on the daily records. Once daily records have passed the period of time that they may need correction, it may not be necessary to keep them in the database.

120 Note that there are two sets of monthly counts for each ATM and month. One set is the accumulated set of daily counts on file for the ATM. The second set is for the processor reported counts for the same period. The processor counts must be manually input into the system.

121 To manually input processor counts use the Monthly Transaction Totals screen. The processor figures can be entered for the appropriate month directly on the processor “row” on the screen.

122 For any number of reasons, including different cutoff times for daily reporting, these sets of numbers might be different. Recording both sets of numbers in the database gives the system the ability to compare the two and alert the user to significant differences that may occur and need further explanation or investigation.

123 ATM Groups are a way to collect any number of ATMs into a set for analysis or reporting purposes. An ATM Group may contain any number of ATMs, and an ATM may participate in any number of groups.

124 An ATM Group is defined by clicking the “ATM Groups” button on the Main Menu. On a new line on this form (FIG. 8A), enter a group name and a description or purpose for the group. The users may also enter other contact information for the group. Once the ATM Group is defined, the users may add ATMs to or delete ATMs from the group by selecting the group and clicking the “Groups and Members” button at the top of the form. All current members of the group are shown. To add another ATM to the group, go to the end of the list and on the first blank line use the drop-down list to select the new ATM to be added. To delete an ATM from the list, click on the ATM’s record selector to the left of the line and press the delete key on the keyboard. Click OK to confirm the delete.

125 ATMs may also be added to groups on the ATM Terminal form itself. The tab labeled ATM Groups lists the groups in which the ATM currently participates. To add another group to the ATM, go to the end of the list and on the first blank line use the drop-down list to select the new group to be added. To delete a group from the list, click on the group’s record selector to the left of the line and press the delete key on the keyboard. Click OK to confirm the delete.

126 ATMs participate in a Group based upon the entry (or lack thereof) of start and end dates. If an entry appears in the Start Date field for an ATM’s participation on a Group, the ATM will not participate in the Group for transactions prior to that date. If the Start Date is left Null, the ATM participates in the Group from the earliest ATM transaction. If an entry appears in the End Date field for an ATM’s participation on a Group, the ATM will not participate in the Group for transactions after that date. If the End Date is left Null, the ATM participates in the Group to the latest ATM transaction.

127 Example: Consider an ATM that has been switched from someone else’s cash to Charter Bank’s cash. The ATM must be set to start participation in the Charter Bank group on the first day it uses Charter cash, so as to not include another bank’s cash in group cash computations.

128 Transaction Activity Printed Reports:

129 The system is equipped with a feature that allows the user to designate whether serial numbers should be entered separately from the rest of the ATM data. This option is located in System Configuration on the Parameters tab (“Require Preregistration of Terminal

Serial Numbers”). The related Terminal Registration form can be accessed from the Main Menu/Terminals and Txns Activity module:

Serial Number Master List Fields:

Name	Description
Serial Number	Terminal serial number
Manufacturer	Terminal vendor/manufacturer (from user defined code table)
Model	Terminal model (from user defined code table)
Dispenser	Terminal dispenser type (from user defined code table)
Price	Price of machine.
Date Shipped	Date ATM was shipped from manufacturer
Warranty Coverage	Manufacturer warranty coverage
Warranty Start Date	Date manufacturer warranty starts
Warranty End Date	Date manufacturer warranty ends
Warranty Cost	Manufacturer warranty cost, if any, including extensions
Disposition	How the asset was disposed, e.g. sold, scrapped, etc.
Memo	Notes on ATM.

130 When the “Require Preregistration of Terminal Serial Numbers” option is set to “Yes”, the following apply:

131 All serial numbers and related machine data (manufacturer, model, dispenser, and manufacturer warranty information) must be set up in the Serial Number Master List form before it can be assigned to a Terminal in the ATM screen. The serial number field located on the ATM screen is a combo box that pulls its information from the Serial Number Master List. If a user tries to manually enter a serial number that has not already been set up, the system will display a warning message that the number is invalid and will not allow it to be entered.

132 When a serial number is chosen from the serial number combo box, all related serial number data (manufacturer, model, dispenser, and warranty information) is displayed and locked. This data can only be edited in the Serial Number Master List form.

133 If a user exits the Information tab on the ATM screen without identifying a serial number, a warning message is displayed.

134 If a user enters a serial number that is currently on file for another machine whose status is "Active", the system will display a warning and will not allow it to be entered.

135 When the "Require Preregistration of Terminal Serial Numbers" option is set to "No", the following apply:

136 There are no restrictions on how serial numbers are entered into the system. Serial numbers can be entered directly into the serial number field on the ATM screen, entered in the Serial Number Master List form, or not entered at all. Note: if no information is entered into the "Master" form, no serial numbers will appear in the serial number combo box on the ATM screen. In this instance, the number must be entered manually into the field on the ATM screen.

137 If serial numbers have been entered into the Serial Number Master List, they will appear in the serial number combo box. When a serial number is chosen from this combo box, the user is given the option to have the system supply all other related data (i.e., manufacturer, model).

138 Fields related to the serial number (i.e., manufacturer, model) are not locked and can be edited directly on the ATM screen.

139 If a user enters a serial number that is currently on file for another machine whose status is "Active", the system will display a warning and will not allow it to be entered.

140 The purpose of the Terms and Accounting Module is to record all income and expense terms, arrangements, contracts and agreements with each business partner in an ATM: merchants, banks, processors, armored cars, and the like. Using these terms as a base, The system can compute the income and expense to each partner each month for each ATM and produce a P & L statement or financial operating statement to accompany an invoice or check to that partner. Further, The system can compute the profitability of each ATM each month and compare it to all other ATM's or ATM groups.

141 Each accounting term is a relationship between the ATM and a business partner. An ATM may have any number of terms associated with it, many with the same partner if appropriate. In turn, each partner may have a terms relationship with any number of ATMs, as appropriate.

142 Before terms can be entered, both the ATM and the Partner must be defined in the database. ATMs are defined to the database on the ATM screen in the Terminals and Txn Activity. Partners are defined to the database on the Partner form in the Terms and Accounting Module.

Name	Location	Description
Name	Tab 1	Partner name. Appears in many screens and reports to identify the partner. Important: see illegal character list.
PID	Tab 1	Partner identification number. System assigned identification number.

Partner Information Tab fields:

Name	Location	Description
Contact	Tab 1	Contact name
Title	Tab 1	Contact business title
Phone	Tab 1	Contact phone
Status	Tab 1	From user defined status code table
Business Type	Tab 1	From user defined business type table
Tax ID Type	Tab 1	From user defined tax ID type table
Tax ID	Tab 1	User's tax ID or social security number
Import/Export ID	Tab 1	Cross-reference ID for Importing/Exporting Data
Address1	Tab 1	Partner address line 1
Address2	Tab 1	Partner address line 2
City	Tab 1	Partner city
State	Tab 1	Partner state
Zip	Tab 1	Partner zip code
Country	Tab 1	Country of Partner
Fax	Tab 1	Partner Fax number
E-Mail	Tab 1	Partner e-mail address

Partner Group Tab:

143 Partner Groups serve a similar purpose to ATM groups – they gather a number of partners into a collection for reporting or analysis purposes. A Partner Group may contain any number of Partners, and a Partner may participate in any number of groups:

Name	Location	Description
Group Name	Tab 2	Name of the group(s) this partner belongs to
Description	Tab 2	Description of the group(s)
Contact	Tab 2	Contact person
Phone	Tab 2	Telephone number of contact

Partner Roles Tab:

144 In addition to the above fields, each partner has a list of check boxes to indicate the types of roles or relationships that the partner has with the system user organization. These check boxes are used to provide lists throughout the system of only those partners that meet certain criteria. The partner roles are available by clicking the Roles tab on a Partner form.

Partner Roles Tab Check Boxes:

Check Box	Tab	Description
Advertiser	3	Is this partner an advertiser on ATMs
Armored Car	3	Is this partner an armored car cash delivery service
ATM Owner	3	Is this partner an owner of ATMs
Bank	3	Is this partner a bank
Cash Customer	3	Is this partner a customer for cash rental
Cash Manager	3	Is this partner responsible for managing cash at one or more ATMs
Cash Provider	3	Is this partner responsible for providing cash
Corporation	3	Is this partner a corporation
Distributor	3	Is this partner an ATM distributor
Insurance Company	3	Is this partner an insurance company
Investor	3	Is this partner an ATM investor
ISO	3	Is this partner an ISO or sub-ISO
Maintenance Co.	3	Is this partner a maintenance provider of ATMs
Merchant	3	Is this partner a merchant
Phone Company	3	Is this partner a telephone company
Processor	3	Is this partner as processor of ATM transactions
Salesperson	3	Is this partner a salesperson or organization that might earn commissions

145 As many check boxes may be checked for each partner as is necessary to define all the roles or relationships that partner has with the system user organization.

Partner Bank Accounts Tab:

146 The bank accounts with which a particular partner is associated need to be designated on the Bank Accounts tab (FIG. 9A) for use in other sections of the system. The Bank Accounts Information tab is shown below:

Partner Bank Account Tab Fields:

Name	Location	Description
Cash Account Name	Tab 4	Name given to the cash account. Cash accounts are set up in the Cash Management module
Bank Name	Tab 4	Name of the bank the partner is using
ABA Number	Tab 4	ABA number of the bank
Account Number	Tab 4	Account number at the bank
Type	Tab 4	Type of bank account
Compute Interest	Tab 4	Is interest computed on balance of this account
Interest Rate from Prime	Tab 4	Interest Rate adjustment from Prime

147 The Statement tab records information about how a partner is invoiced by tracking reports which are sent to partners.

148 The Statements Information tab is shown below:

Name	Location	Description
Report Name	Tab 5	Name of Report
Frequency	Tab 5	Frequency of Report
Delivery Method	Tab 5	Delivery method of Report
Start Date	Tab 5	Start date
End Date	Tab 5	End date

149 The User Fields tab is an area setup to store user-defined data items.

150 This area is used to consistently maintain Partner-specific data that is not already part of the system Pro system. There are four categories of fields: numeric, currency, text, and

date. Each of these four categories has four fields available. The setup of User Fields is described in detail in the “System Configurations” section below.

Name	Location	Description
Numeric	Tab 6	Field will hold any numeric value
Currency	Tab 6	Field will hold any currency value
Text	Tab 6	Field will hold any text value
Date	Tab 6	Field will hold any date value

151 The Notes tab is an area for Partner-specific notes. This area is used to record changes or problems related to a Partner. Notes are entered on this form and displayed chronologically by the last note entered. The system is also equipped with a “tickler” process. If a future date is entered into the system under “Next Contact”, the system will display a reminder to the user on that date.

Name	Location	Description
Date	Tab 6	Activity date for the note (e.g., date the ATM experienced problems)
Type	Tab 6	Type or category of note
Next Contact	Tab 6	Date scheduled for the next contact
Added	Tab 6	Date the note was added to the system
Last Change	Tab 6	Date the note was last updated or changed
By	Tab 6	User who entered the note
Notes	Tab 6	A description of the reason for the note

152 When the users first enter Partner-related forms, all Partners in the database are usually listed. As the users store more and more Partners in the system, it may become more difficult to locate a particular Partner or a group of Partners. On any The system form, the users may use the standard Microsoft Access Edit/Find command menu option to search for certain values in certain fields in the upper section of the form.

153 However, the system provides another more powerful search capability to locate Partners of interest. The forms or screens equipped with this search capability have the following box located at the top of the screen:

154 The “Partner” and “Address1” drop-down boxes allow for quick searches. In addition to the “quick” search, there is also an expanded search and filter capability that can be accessed by pressing the binoculars button.

155 When the binoculars button is pressed, the following search criteria form is opened:

156 This form is setup so that more than one item may be selected at any time. When more than one item is selected, the system will search for any Partners that match all the selected criteria. (e.g., if the first criteria selected is “Active” under “Status” and the second is “NY” under “State”, the system will find all Partners that are active and located in New York.).

157 This form is also setup so that certain fields allow “Search Strings,” “Search Strings” are searches that allow wildcard characters in the search. The following table lists the wildcard characters supported and their meaning:

Character	Usage	Example
*	Matches any number of characters. It can be used as the first or last character in the character string.	wh* finds what, white and why
?	Matches any single alphabetic character	B?ll finds ball, bell and bill
[]	Matches any single character within the brackets	B[ae]ll finds ball and bell not bill
!	Matches any character not in the brackets	b[!ae]ll finds bill and bull but not bell
-	Matches any one of a range of characters. The users must specify the range in ascending order (A to Z, not Z to A)	b[a-c]d finds bad, bbd, and bcd
#	Matches any single numeric character	1#3 finds 103, 113, 123

158 To search using the Search Criteria form, choose the criteria by which the users would like the system to search by following the guidelines above. After the users have chosen the appropriate criteria, click the “Search” button. The system will close the Search Criteria form and display the form from which the users launched the search. This “launch” form will

only display the records that met the criteria of the user's search (use the navigation buttons at the bottom of the form to move from record to record.) To cancel the search and once again display all records, click the "Show All" button.

159 To reset the criteria on the search criteria form, click the Reset button. All the fields on the form will return to the "_ALL" status and check boxes will be cleared. The users may also cancel/close the search criteria form and no filter will be applied.

160 Entering a complete set of agreement terms for each ATM, and keeping them up to date as changes occur, is extremely important. Income, expense and profitability computations are only as accurate as the terms on which they are based.

161 Each individual term record represents an income or expense component or intermediate computation between the ATM and a partner. Each record is composed of the following fields:

Field	Description
Line	Line number to sequence the terms lines within an ATM. Required. Must be a unique entry within the ATM.
Type	Income (Inc) or Expense (Exp) to the user. May also be a Computed entry (Cmp) that is used later in the terms lines. Required entry.
Charge Code	System table of user defined accounting charge codes. Required entry.
Income From/ Expense To	Partner from whom income derived or expense given. Required entry.
Start	Beginning effective date of this terms line. Required entry. (The system does support a Mid-Month start date. If users enter a start date of the 15 th , monthly computations for the line will only include transactions from the 15 th to the end of the month.)
End	Ending effective date for this terms line. Required entry. (Note: The system does support a Mid-Month end date. If the users enter an end date of the 15 th , the computations for the line will only include transactions for the first 15 days of that month.)
Base	Factor or field on which the calculation is based. Required entry.
Frequency	Frequency on which the calculation is based. Required entry.

Value, Equation, Table or Actual	Value, equation or table to apply in conjunction with the base and frequency. Required entry. When the base is "IntAmt", "ScgAmt", or "WdlAmt", the word "Actual" must be placed in this field. (Note: the system supports line computations which are entered in this field. For further details, please refer to "Computed Values in Terms Lines" later in this section of the manual.)
Minimum Amount	The minimum amount allowed for terms line computation. If calculation total fall below this figure, the minimum amount is used.
Maximum Amount	When an amount is entered into this field, the system will check the calculation for the line to verify that it is equal to or less than the maximum. If the calculation is higher than the maximum, the system will substitute the maximum amount supplied.
Direct Deposit	Check this box if the amount determined for this terms line is deposited directly in the partner's account
Provide Phone	Check this box if this partner provides the phone for the ATM

162 The charge code field identifies the category of charge (income or expense) represented by the terms line. Charge code values can be user defined by clicking on the System Configuration button, going to the Acctg. Charge Codes screen, and adding the new code in the next blank line at the bottom. In any case, the following standard list is delivered with the system:

Charge Code	Charge Code Name	Charge Code Description
AdvRecpt	Receipt Advertising	Charge for advertising on receipt
AdvScrn	Screen Advertising	Charge for advertising on screen
AdvWrap	Wrap Advertising	Charge for advertising on ATM
Amort	Hardware Amortization	Charge for amortization on equipment
Commisn	Commission	Payment to a salesperson
CshCharg	Cash Charge	Charge for cash
CshCost	Cash Cost	The cost of cash from the cash supplier

CshInsur	Cash Insurance	Cost of insurance for cash, hardware, etc.
CshLoad	Cash Load	Cost of each armored car delivery
CshResp	Cash Responsibility	Cost for managing cash balances in the ATM
FrstLine	First Line	Cost of first line maintenance (e.g. paper replacement)
InterChg	Interchange Revenue	The amount of the interchange revenue for each transaction
Lease	Lease	Hardware lease or rental cost
Maint	Maintenance	Cost of second line maintenance (e.g. hardware repair)
MgmtFee	Management Fee	Cost of management of ATM operations
NetAcces	Network Access	Charge to owner or merchant for network access
NetSpnsr	Network Sponsorship	Charge for network sponsorship
OwnerFee	Owner Fee	Fee paid to owner of ATM
Procssng	Txn Processing	Network fee to process transaction
SiteFee	Site Fee	Fee paid to site owner
StateCst	State Cost	Fee paid to some states for ATM registration
Interchg	Interchange Revenue	Interchange transaction fee
TxnSrchg	Txn Surcharge	Fee for processing a cash withdrawal

163 Term Base, Frequency and Value Entries

164 The terms base, frequency and value entries define upon what the charge is based (base), how often it is charged (frequency) and the value or table to apply when doing the computation. Because these tables are used in computations, they may only be added to by e-Classic Systems. The entries are system defined and include the following options:

Base Code	Base Code Description
BigTxn	Per Balance Inquiry Transaction
Comptd	A computed amount based on references to other line numbers and/or arithmetic operators
DnyTxn	Per Deny Transaction
IntAmt	Use the actual interchange amount from the daily processor file. (Note: when using this as a base, the word "Actual" must be placed

	in the “Value, Equation, Table or Actual” field.)
IntTxn	Per Interchange Transaction
Manual	A manually entered amount, for example because it changes every month
N/A	Not Applicable
Once	Once per Frequency (e.g. once per cash load, once per month)
Prime	Prime Interest Rate
ScgAmt	Use the actual surcharge amount from the daily processor file. (Note: when using this as a base, the word “Actual” must be placed in the “Value, Equation, Table or Actual” field.)
ScgTxn	Per Surcharged Transaction
TfrTxn	Per Transfer Transaction
TtlTxn	Per Total Transactions
WdlAmt	Actual Withdrawal Amount. (Note: when using this as a base, the word “Actual” must be placed in the “Value, Equation, Table or Actual” field.)
WdlTxn	Per Withdrawal Transaction

Frequency Code	Frequency Code Description
Call	Per Call or Visit
Daily	Per Day
Load	Per Cash Load
Monthly	Per Month
Percent	Percent (e.g. of another line#)
Table	Based on a Table
N/A	Not Applicable

165 The value entry may be a number including decimal positions. It may also be the reserved word “Actual” indicating that the actual amount on the processor file is to be used. It may also be an arithmetic expression.

Rate Tables

166 Rate Tables are used when the charges to be computed change based on the number of transactions in a period. For example, if a merchant is paid 15 cents per transaction for the first 500 transactions per month, then 25 cents for the next 500, then 30 cents for all transactions over 1000 per month, a rate table to properly compute such charges would look like this:

167 Table ID: NP119; Table Name: Example

Low	High	Value
1	500	.15

501	1000	.25
1001	99999	.3

168 Any number of rate tables can be defined using the Rate Table button on the system Main Menu. The Table ID field value is used as the key when referring to the table in Terms records.

169 A rate table may be designated as Incremental or Retroactive. If Incremental, each of the line values is applied within that bracket only. An example is the explanation of the table immediately above. If Retroactive, as each line is reached, the value on that line is applied to all the previous lines as well.

170 The Prime Rate table is simply a special case of a rate table. The Prime Rate table is available from a button on the Rate Table form, and consists of start date, end date and prime rate values for appropriate periods. Both of these tables may be added to by simply going to the next blank line in the table and adding the new rate.

171 The users can use other ATM Agreement Term lines in calculations for new “Term” lines. There are several ways in which “Term” lines can be manipulated using addition, subtraction, multiplication, and division. This manipulation can include interaction between lines and with other numbers (i.e., Line 1 * Line 2, Line 1 * .5, Line 1 * Average Surcharge).

172 “AvgScg” Keyword Description: when “AvgScg” is included in a terms line, the system calculates the average surcharge amount for the period and then performs the requested computation. For example, the following line can be entered in the “Equation” field: $L1+L3*\text{AvgScg}$. If the average surcharge were calculated to be \$1.50, then the system would calculate Line 1 plus Line 3 and multiply the sum by 1.50.

173 An equation is entered into the “Value, Equation, Table, or ‘Actual’” field on the ATM Agreement Terms form. This equation is then used to calculate the computed amount when the “Show Acctng” button is pressed.

174 There are formatting rules which apply to the entry of an equation:

175 The equation must begin with a line number

176 All line numbers must have the designation “L” placed before the number (e.g.,
for line number 12, “L12”)

177 Equation calculations are not based on operator precedence (e.g., multiplication performed before addition). Lines are evaluated in sequence from left to right. Therefore, if the

users enter "L7 + L3 * L2", the system will add Line 7 and Line 3 and then multiply this sum by Line 2.

178 There must be an operator between a line number and another number or key word.

179 Any number of lines may be included in the equation. However, to be included in the computation, all line numbers must occur before the line containing the new term. (e.g., if the equation is on Line 8, Line 10 cannot be part of the computation.)

180 The system will only recognize the following characters: L, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, +, -, /, *, decimal points (.) and key word "AvgScg". All other characters will be ignored during computations (e.g., spaces, parenthesis, brackets, etc.).

181 The percent sign (%) should not be used on any terms line.

182 The following are examples of how different entries will be evaluated by the system:

Entry	Computation
L1+L2	Line 1 plus Line 2
L1 + L2	Line 1 plus Line 2
L1 + (L2 * L4)	Line 1 plus Line 2 then multiplied by Line 4
L1/[L8-L9]	Line 1 divided by Line 8 and then Line 9 will be subtracted from the result. The brackets have not effect on calculation.
L1 * .25	Line 1 multiplied by .25
Line 1 * .25	Line 1 multiplied by .25
Multiply L1 * L2	Computation does not match format rules.
L1+L5*AvgScg	Line 1 plus Line 5 and then multiplied by n where n equals the average surcharge amount for the period.
L1.5	Invalid Line Number

How To Enter an Equation:

183 Equations are entered in the field: "Value, Equation, Table, or 'Actual'". For an equation to take effect, the general rules as outline above must be followed and "Comptd" must be selected in the "Base".

184 When the accounting is displayed for a valid equation, the equation will appear under comments. (e.g., L1+L2)

Line Types – "Inc", "Exp", and "Cmp":

185 Computed lines may be designated as type income, expense or computed. If the "Exp" or "Inc" is chosen for the "Type", then the computed amount will be included in any totals

that are generated on forms and reports. (e.g., the total on the Monthly Accounting Report will include the line.)

186 If the type for the computed line is designated as “Cmp”, then the computed amount will not be included in any of the totals that are generated on forms and reports. This feature would most likely be used in situations where one computed line is based on another. (e.g., a sum of several lines could be generated in a computed line and designated as type “Cmp”, then this line could be multiplied in another line by 50%. The second line could be designated as either expense or income and would be part of any totals.)

187 Non-active Line Numbers:

188 Line numbers that do not yet exist or are not active (i.e., future “Start Date”) are not treated as invalid line numbers. These line numbers are ignored in the calculation. Therefore, if the equation is $L1 + L2/L3$ and $L2$ does not exist or is not active, the system will compute the following: $L1/L3$.

189 When the accounting is displayed, ignored lines are identified under comments. (e.g., for an equation of $L1+L2 +L3/L4$ where $L2$ does not exist, the following will appear under comments: “Eqtn: $L1+L2+L3/L4$, Ign: $L2$ ”. This means that “ $L2$ ” was ignored and the system added $L1+L3$ and then divided by $L4$.)

190 Here are some examples of terms records and their explanation:

Base	Frequenc y	Value	Explanation
ScgTx n	Daily	1.50	Income or expense charge is \$1.50 times the number of surcharged transactions each day
SurA mt	Daily	Actual	Income or expense charge is taken from the value on each transaction on the processor's daily file
Once	Monthly	75	Income or expense charge is \$75.00 per month
Prime	Daily	+1	Income or expense charge is the average daily ATM cash balance times (Prime Rate + 1%)/365 days. Note: the percent sign (%) should not be entered.
WdlTn	Table	NP119	Income or expense is based on a table of values. The number of withdrawal transactions each month is processed against the amounts in the table. (This example refers to the table example given in the previous section.)
Compt d	Daily	$L1+L2$ $-L4*.5$	Add lines 1 and 2, subtract line 4, then take 50% of the net of that number

191 Once a set of terms lines has been established for an ATM, that set of terms may be copied from a selected source ATM to other target ATMs, easing data entry requirements. This process is useful even if not all of the terms lines for the target ATM are the same as that of the source ATM. The full set of lines can be copied and additions, changes and/or deletions made to the set belonging to the target ATM to make it correct.

192 To copy a set of terms lines from one ATM to another, click the “ATM Terms” button on the Main Switchboard and select the target ATM to which the users want to copy terms lines. Note that any number of terms lines may already exist for this ATM – any terms lines copied from another ATM will be added to the set already present. Click the “Copy More Terms Lines” button. Scroll to the source ATM whose lines the users wish to copy and click the “Duplicate These Terms Lines in the Target ATM” button. The users will be returned to the Target ATM display screen and the source ATM lines will have been copied to it.

193 The users may also copy a terms line from one ATM by selecting the line (clicking in the gray box on the left of the line), copying it (selecting Edit/Copy or hitting Ctrl + C), and then pasting the line into the terms of any number of additional ATMs. Remember that the line number must be unique within each ATM.

194 Monthly accounting is the computation of an income or expense charge for each terms line for each ATM each month. For the most part, the computations take place on the monthly statistical data in the ATM Activity Module. In a few cases, such as interest charges that must be calculated on the average daily ATM cash balance, the computations take place on the daily statistical records.

195 The users may have the system compute monthly accounting at any time during the month, which will result month to date income and expense costs for the current month.

196 To compute monthly accounting income and expenses for a monthly period:

197 The system keeps all daily and monthly balances up to date in normal daily processing. However, to make doubly sure that the entire database is in balance before “closing” a month and printing ATM and partner reports, the users should do the following:

198 Using the Audit Checks button on the Main Menu, check for missing daily records and generate records for any missing days;

199 Click the “Calculations” button on the Main Menu;

200 Click the “Recompute All Daily Cash Balances” button to ensure that all cash balances are updated;

201 Click the “Rollup All Daily Statistics to Monthly” button to ensure that all monthly statistical records reflect the current total of the daily records;

202 Click the “Recompute All Monthly Accounting” button to recompute all monthly income and expenses for all ATMs;

203 Click the “Recompute All Cash Account Balances” button to recompute all monthly cash account balances for all ATMs.

204 The users may now run various reports that contain income and expense charges. A full list of reports available in the Terms and Accounting Module is given below.

205 Partner Groups serve a similar purpose to ATM groups – they gather a number of partners into a collection for reporting or analysis purposes. A Partner Group may contain any number of Partners, and a Partner may participate in any number of groups.

206 A Partner Group is defined by clicking the “Partner Groups” button on the Main Menu. On a new line on this form, enter a group name and a description or purpose for the group. The users may also enter other contact information for the group. Once the Partner Group is defined, the users may add Partners to or delete Partners from the group by selecting the group and clicking the “All Groups and Members” button at the top of the form. All current members of the group are shown. To add another Partner to the group, go to the end of the list and on the first blank line use the drop-down list to select the new Partner to be added. To delete a Partner from the list, click on the Partner’s record selector to the left of the line and press the delete key on the keyboard. Click OK to confirm the delete.

207 Partners may also be added to groups on the Partner form itself. The Groups tab on the Partner form lists the groups in which the Partner currently participates. To add another group to the Partner, go to the end of the list and on the first blank line use the drop-down list to select the new group to be added. To delete a group from the list, click on the group’s record selector to the left of the line and press the delete key on the keyboard. Click OK to confirm the delete.

208 The system Pro provides the user with greater flexibility in the generation of Partner related information. This feature can be accessed through the Screen Reports, Partner Custom Listing form:

209 The Partner Custom Listing form allows a user to sort and filter Partners in several ways such as group, location, status, role, etc., and then apply that filter to reports. The following reports are available on this form:

210 Print Preview – a general report on Partners (includes items such as location and contact name).

211 Partner Accounting (Net Due) – a report that provides a summary list of the net due on Partners Monthly Accounting for a chosen time period.

212 Print Partner Monthly Accounting Report – generates the “Partner Monthly Accounting Report” for a chosen time period.

213 Print Partner Monthly Stmt – generates the “Partner’s ATM Monthly Statement” report for a chosen time period.

214 Print Partner Daily Transaction Activity Statements – generates the “Partner Daily Transaction Activity Statements” for a chosen time period.

215 Export to Accounts Payable – (Optional feature) – begins the export wizard into Quickbooks

216 Note: if the users have used a filter, the reports above will only include those partners within the group displayed for the chosen time period.

217 To generate a report based on selected criteria:

218 Click the binocular button in the “Select Criteria” section of the Partner Custom Listing Form. This will open the “Partners Search Criteria” form.

219 Select the criteria for which the users would like the system to generate a search. After selecting the criteria click the “Search” button. The system will open the Partner Custom Listing form displaying the records that match the usersr search. (Note: the system will also place the criteria used in the “Criteria” box at the top of the form.)

220 Select the radio button for the report the users would like to generate based on the criteria and click “Execute”. The selected report will only include those terminals that meet the criteria (and time period, if applicable).

221 There is an option to save and recall past search criteria on a user-level. This means that each user on the system can save and recall individual search criteria. Currently, the system can only store one search per user at any one time. Therefore, each time a user saves a new search criteria, it will replace any criteria already on file for that user.

222 To save search criteria, click the binocular button on the Partner Custom Listing form. Then choose the criteria by which the users would like to search/filter and click the “Search” button. When the system returns the users to the Custom Listing form, click the “Save Criteria” button below the binocular button. The search criteria is now stored in the usersr user file. The next time the users wish to call up files based on the stored search criteria, click the “Recall Criteria” button.

223 The following table lists some of the screen reports available based on the data in the Terms and Accounting Module. Here’s how to display them:

Screen Report	Form	Purpose and Notes
ATM Agreement Terms	Terms and Accounting Module: ATM Terms	Display of all the terms or agreement lines for each ATM (listing any and all partners)
Partner Agreement Terms	Terms and Accounting Module: Partner Screen: Terms button	Display of all the terms or agreement lines for each Partner (listing any and all ATMs)
ATM Accounting By Mo.	Terms and Accounting Module: ATM Accounting button	Display of the income and expense computations for each ATM for each month (one month per screen)
Partner Accnting By Mo.	Terms and Accounting Module: Partner Accounting button	Display of the income and expense computations for each Partner for each month (One month per screen)
Monthly Profit Charts	Screen Reports: Monthly Profit Charts	Graphically displays in a bar chart the net profit for each ATM for each month
Monthly Profit and Cost Comparison	ScreenReports: Monthly Profit and Cost Comparison	Lists several profit and cost calculations over the last 6 months for each ATM, and ranks them from the highest to the lowest
Monthly Profit Comparison	ScreenReports:Monthly Profit Comparison	Lists monthly profit comparisons and ranks them from the highest to lowest
Monthly Profit Comparison by Group	Screen Reports: Monthly Profit Comparison by Group	Lists monthly profit comparisons by group and lists them by alpha
ATMs With No	Audit Checks:	Lists all terms and conditions

Accounting Terms	ATMs With No Accounting Terms	that have one or more missing factors
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224 The following table lists the printed reports available based on the data in the Terms and Accounting Module. Here's how to produce them:

Report	Form	Purpose and Notes
Partner Master List	Printed Reports: Partner Master List	Listing of all partners with contact names, addresses, phone numbers and e-mail addresses
Partner Roles and Relationships	Printed Reports: Partner Roles and Relationships	Listing of the role and relationship check boxes for all partners
ATM Monthly Profit Comparison	Printed Reports: ATM Monthly Profit Comparison	ATM's ranked by average profit contribution and grouped by status code.
Monthly Profit Comparison	Printed Reports: ATM Monthly Profit Comparison	Prints the average net profit over the last 6 months for each ATM, and ranks them from the highest to the lowest
ATM Agreement Terms – Expired	Printed Reports: ATM Agreement Terms	Expired agreement terms on file for all partners of an ATM
ATM Agreement Terms – Future	Printed Reports: ATM Agreement Terms	Agreement terms not yet in effect for all partners of an ATM
ATM Agreement Terms	Printed Reports: ATM Agreement Terms- and - Terms and Accounting Module: ATM Terms: Preview Report button	Agreement terms on file for all partners of an ATM
Partner Agreement Terms	Printed Reports: ATM Agreement Terms- and - Terms and Accounting Module: Partners: Terms: Preview Report	Agreement terms on file for all ATMs for a partner.
ATM Monthly Accounting	Printed Reports: ATM Group Monthly	Monthly accounting computations for an ATM for all partners in the ATM, based

	Accounting -and- Terms and Accounting Module: ATM Accounting: Monthly Accounting Report button	on the terms current for a period
Partner Monthly Accounting	Printed Reports: Partner Group Monthly Accounting and - Screen Reports: Partner Custom Listing- and - Terms and Accounting Module: Partner Accounting: Accounting Report	Monthly accounting computations for a partner for all ATMs in which the partner participates, for one month, based on the terms current for that period. This report has a large top margin so that it can be printed on the usersr letterhead paper.
Partner Monthly Statement	Screen Reports: Partner Custom Listing and - Terms and Accounting Module: Partner Accounting: Monthly Statement	Monthly accounting computations for a partner for one ATM for one month with charts of daily activity and documentation of accounting terms in effect. Includes the user's Company Name form the Configuration Screen in the header of the report.
Partner Transaction Activity Statement	Screen Reports: Partner Custom Listing and - Terms and Accounting Module: Partner Accounting: Txn Activity Statement	Monthly transaction, income and expense data for all ATMs in which the partner participates for a month.
Average Profit Contribution	Screen Reports: Monthly Profit and Cost Comparison	ATM's ranked by monthly average profit. (Double-click on "Avg Profit Contrib" label and click "Print Preview" for report.)
Profit Per Surcharge Transaction	Screen Reports: Monthly Profit and	ATM's ranked by monthly profit per surcharge txn.

	Cost Comparison	(Double-click on "Profit/Surch Txn" label and click "Print Preview" for report.)
Profit Per Total Transactions	Screen Reports: Monthly Profit and Cost Comparison	ATM's ranked by monthly profit per total txns. (Double-click on "Profit/Surch Txn" label and click "Print Preview" for report.)
Interest Per Surcharge Transaction	Screen Reports: Monthly Profit and Cost Comparison	ATM's ranked by monthly interest per surcharge txn. (Double-click on "Interest/Surchg Txn" label and click "Print Preview" for report.)
Armored Car Expense Per Surcharge	Screen Reports: Monthly Profit and Cost Comparison	ATM's ranked by armored car expense per surcharge txn. (Double-click on "ArmCar Exp/Surchg" label and click "Print Preview" for report.)
ATMs With No Accounting Terms	Audit Checks	Lists all terms and conditions that have one or more missing factors (click "Preview Report")

225 The system Cash Management Module tracks cash balances in each ATM, provides cash ordering functions, records armored car ATM cash replenishment actions, and keeps ledgers of cash amounts or liabilities at various locations such as the ATM itself, bank accounts, armored car depots and selected partners. The Cash Management Module anticipates cash shortages at ATMs and suggests cash orders to replenish the cash before it runs out.

226 In the ATM record display (Terminals and Txn Activity) there are a number of fields associated with the cash management function. If the users intend to manage or track cash balances for an ATM, the "Monitor Cash" check box in the ATM record must be checked. This check box indicates to the Cash Management Module that the ATM should appear on its various screens.

227 In the system Terminals and Txn Activity, ATM cash withdrawal activity is captured daily from processor-supplied information or manual data entry. This allows the Cash Management Module to compute the remaining cash balance in the ATM, and sets the stage for the cash replenishment functions described below.

228 Cash Accounts are bank or vault cash accounts to which cash is deposited or from which cash is withdrawn. Each cash order withdraws cash from a cash account for delivery

to ATMs. The account may be the main cash supplier account (e.g. a bank account) or some other cash account (e.g. at an armored car location) where sufficient cash is available. When cash is returned from a cash load because the load was a swap or because all the cash ordered could not be added to the ATM for some reason, the returned cash must be deposited into an available bank account.

229 Money in cash accounts may be designated as interest bearing or not. For example, cash in an armored carrier's vault may be interest bearing while cash returned to a main source of cash account may not be interest bearing.

230 Money may be transferred between bank accounts. For example, the users may direct an armored car carrier to transfer excess funds kept in their account back to the main bank account in order to reduce interest costs.

231 The total cash exposure of a group of ATMs may be tracked as the total of cash in ATMs or due to be delivered to ATMs and the total of cash held in various cash accounts.

232 Cash Accounts may be viewed by clicking the Cash Account button on the Main Menu. To see the detail withdrawals and deposits to any cash account, click the Account Details button. In general, withdrawals from and deposits to cash accounts are the byproduct of The system transactions such as cash orders and ATM loads, and no direct maintenance of the cash account transactions is necessary. The users may print a statement for any period for a cash account by clicking the Cash Account Activity button on the Printed Reports

233 To open a cash account, click the Add New Cash Account button on the Cash Account screen, enter a name for the account, select a partner that owns the account, and check the Compute Interest box if money in the account is interest bearing. Several other optional fields are available on the form to further document the cash account if the users wish. Close the form and the new account is available for use.

234 To view a daily summary of account activity, click the Account Details button on the Cash Account screen. The following Cash Account Transactions will be displayed:

235 Cash account transactions are deposits to or withdrawals from the account. Deposits can occur by cash being returned from an ATM (e.g. a swap or all the cash would not fit) or cash transferred from another account. If cash is returned from an ATM, the Terminal ID appears in the Terminal ID column. If cash is transferred from another account, the Account Name appears in the Transfer Acct column. Withdrawals occur when a cash order is placed on

the account. The Cash Order ID will appear in the Order ID column. Dates on which there are no account transactions will still appear in the list, as interest may need to be computed on the account balance on those days.

236 Cash account balances indicate where the user's money is located. To make the best use of the money the users may need to transfer it from one location to another. To transfer money directly between two cash accounts, click the Cash Acct Transfers button on the Cash Account screen and the following screen will be displayed:

237 Select the account sending cash, the account receiving cash, and the date and amount of the transfer. The users may optionally enter a comment or note for this transfer to help document the reason for the transfer. Click the Post Cash Transfer button to post the transfer to the database.

238 Click the Review Cash Transfers button on the Cash Account Transfers screen to change information about any cash transfer the users have already posted:

239 All cash transfers on file are listed on the screen. The display may be sorted by any column by double-clicking on the corresponding column header. Find the transfer the users wish to change. Enter only the changes necessary in the fields at the top of the screen and click the Post Changes button. The system will make the necessary changes and update all cash account balances. Click the Delete Cash Transfers button on the Cash Account Transfers screen to delete a cash transfer the users have already posted:

240 All transfers currently within the system will be listed on this screen and assigned a sequence number. The display may be sorted by any column by double-clicking on the corresponding column header. To delete a transfer, find the transfer the users wish to change, enter its "Seq #" in the field at the top of the form and click the delete button. The system will delete the cash transfer from all accounts.

241 The following fields occur on the master ATM record display using the Cash Management Tab, and pertain to the cash management function. Complete entry of this information provides for speedy cash management operations.

Field	Description
Monitor Cash	A check box indicating that cash is to be monitored (viewed on certain forms and charts) for this ATM. Certain ATM information will not

	appear in the Cash Management screens unless this box is checked
Cash Responsibility	Pointer to partner that is responsible for cash management
Cash Rented From	Pointer to partner from whom is rented
Cash Rented Account	Pointer to a cash account that is the main source of cash for this ATM
Armored Car	The normal armored car service that delivers cash to this ATM. Only those partner records show in this drop-down list that have been checked as an armored car service.
Cash Return Account	Pointer to the cash account used to deposit returned funds from this ATM
Add or Swap	Is the normal cash replenishment operation an Add or a Swap. If no entry is made in this field, the operation is assumed to be a Swap.
Cash Low Limit	If the low point for cash replenishment planning purposes is not zero, enter the desired cash low point (e.g. 500)
GL Cost Center	A General Ledger account code for this ATM. Used to provide an interface report to the user's G/L system.
Propose Order Using	Indicates to the cash forecasting system how to suggest a new order amount. Standard indicates to use the standard amount; Computed indicates to compute an amount abased on the average withdrawals times the number of days to cover plus pad days.
Standard Load Amount	The normal cash replenishment amount
Number of 5s	The number of \$5 bills in the normal cash replenishment amount
Number of 10s	The number of \$10 bills in the normal cash replenishment amount
Number of 20s	The number of \$20 bills in the normal cash replenishment amount
Number of 50s	The number of \$50 bills in the normal cash replenishment amount
Number of 100s	The number of \$100 bills in the normal cash replenishment amount
Order Lead Time	The expected lead time in calendar days from date of issuing order in the usersr department to the date of armored car pickup.
Days Order To Cover	The number of days a computed order amount is to cover

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Days To Pad Order	The number of pad days to add to the Day Order To Cover days in computing the suggested order amount
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242 Deposits to the ATM are applied before withdrawals. This only affects the ATM cash balances for swaps. Adds are not affected. This will have some affect on the Cash Needs/Forecasting because the ATM balance will be somewhat lower at the end of the day for Swaps. Cash Cost interest calculations are not affected by this change.

243 Cash balances for ATMs are (re)computed whenever any of several events occur:

244 the cash withdrawal amount in an existing daily record is changed;

245 records from the Import Edit File are posted to the database;

246 a cash order is posted to the database, thereby updating the cash balance with pending deliveries field,

247 a cash load is posted via the Cash Load screen, thereby updating the cash balance with confirmed deliveries field, or

248 cash load information is changed manually in an existing daily record.

249 In each of these cases, after the new entry or modification is made to the database, The system will immediately re-compute the daily ending cash balances affected by the change, and roll that balance forward through all more recent activity on file.

250 The Cash Summary button on the Main Menu provides comprehensive information about the cash usage history of the ATM, the current cash status, and projections about future cash usage. The Cash Summary form looks like this:

251 This screen has four parts:

Daily Cash Remaining Chart

252 This chart shows the daily cash balance at the end of each day in the ATM. The chart displays data for the last six months, if there is that much history in the database. This chart can be very useful in analyzing the rate at which cash is being withdrawn, and the frequency and amounts of cash loads to the ATM.

Cash Summary

253 The cash summary box shows the following information:

Field	Description
Today Is	Today's date

Last ATM Data	Last date for which a daily record is on file. Helps determine how current the projections below will be.
Cash Left Then	Amount of cash left in the ATM on the Last Data date above
Average Withdrawals/Day	Average withdrawal amount per day. The number of days included in this calculation is set in the system configuration.
Days Left from Today	Computation of how many days of cash are left in the ATM based on the Avg WD/day
Out Of Cash	Computation of when the ATM will run out of cash based on the above calculations
Add or Swap	Is the ATM marked for a regular Add or Sap operation
Low Limit	Lowest amount of cash to be kept in the ATM.
Base Order On	Base a proposed order on either the Standard amount or a Computed amount
Standard Order Amount	The standard cash load amount, taken from the entry in the cash management section of the ATM record
Standard Order Will Last	Computation of how many days the standard load amount will last based on the Avg WD/day
Order Duration	For a computed order amount, the number of days the order is to cover
Pad Days	For a computed order amount, the number of pad days to add to the Order Duration days
Computed Order Amount	The result of adding the number of Order Duration days and Pad Days, and multiplying the total by the average withdrawal amount (which is based on the number of days specified in the System Configuration screen)
Computed Order Will Last	The number of days that the computed amount will last
Replenishment Cycle	The desired replenishment cycle for this ATM
Replenishment Week	For a replenishment cycle of Bi-weekly or monthly, a selection of the "A" week or the "B" week
Replenishment Days	The days of the week that the armored service will replenish this ATM without extra charges

Cash Load History

254 This box contains a scroll list of the cash loads made to the ATM, their date and whether they were a cash add or canister swap

Unconfirmed and Future Cash Orders

255 This box contains a scroll list of any new cash orders that have been issued for the ATM, but for which the cash has not yet been delivered. The orders are designated as posted or

not posted. Un-posted orders are considered works in process (i.e. incomplete) but are listed in this box for information purposes.

256 For more detailed analysis on the underlying data of any ATM, the users may click the Daily Transaction History button at the top of the screen to display all of the daily records on file for the ATM. Closing the Daily Transaction History button will return the users to the Cash Summary screen.

257 Taken together, these four parts of the Cash Summary screen give a broad view of the history, current status, cash usage projections and scheduled cash replenishments for each cash monitored ATM. The entire display can be printed by clicking the Print Preview button at the top of the screen.

258 The Cash Needs button on the Main Menu displays each cash monitored ATM listed in order by the estimated out-of-cash date. The Cash Needs form looks like this:

259 This display is useful in determining which ATMs are due to run out of cash first and what action, if any, has been taken so far in replenishing the cash. A horizontal scroll bar at the bottom of the screen allows the users to see more information on each line. The fields on this display are explained below:

Field	Description
Est Date Cash Out	Projection of the date that cash will run out of the ATM based on the average daily withdrawal rate
Terminal	Terminal ID
Location	Terminal Location
Date of Last Txns On File	Last date that processor data is on file
Csh Left On Last Txn Date	Estimated remaining cash on the last date of processor data on file
Average Withdrawals Per Day	Computation of the average withdrawal amount per day based on the number of days specified in the System Configuration Screen
Load Date	Date of last cash load
Load Amt	Amount of last cash load
A/S	Indication of whether last load was a swap or an add
Repl Cycle/ Segment/ Days	Currently stored replenishment information. (Data entered into ATM Terminals Screen, Replenishment tab.)
Order Date	Order date proposed by the system. The system uses the Delivery Date and the data entered into the "Order Lead Time" field of the ATM Terminals' Cash Management tab to determine

	a date by which cash should be ordered.
Delivery Date	Delivery date proposed by the system. The system uses the Est Date Cash Out and the data entered into the ATM Terminals' Replenishment tab (e.g., Replenishment Cycle) to determine what the next delivery date for the cash should be.
Order Base	Currently stored default order information. (Data entered into ATM Terminals Screen, Cash Management tab, e.g., Computed or Standard)
Order Amount	Proposed cash order amount. (The order base determines how this amount is calculated. For details on Computed versus Standard, please refer to the Cash Orders section below.)
A/S	Currently stored Add/Swap information. (Data entered into ATM Terminals Screen, Cash Management tab.)
Will Last (Days)	Number of days the proposed order should last. (Based on average withdrawals.)
Days w/Cash after Today	Average withdrawals have been projected and this field shows the number of days after today that the ATM will have cash available
Days Left On Date Of Last Txns	The number of days left from the date of last processor data on file. Note the difference between this date and the Days Left with Cash after Today
Posted Overdue Deliveries Included	A number appearing in this column indicates the number of cash deliveries that have been included in the Cash Left amount prior to today. These are deliveries that have not been confirmed by entering the data from an armored car replenishment report
Estimated Cash With Future Delvries	The total amount of cash available to the ATM including future deliveries contained in posted cash orders
Posted Future Deliveries Included	A number appearing in this column indicates the number of future cash deliveries that have been included in the Estimated Cash With Future Deliveries amount

260 Entries on this list may need deeper investigation. Double-clicking on any line of this display will produce the Cash Summary screen for the selected ATM.

261 A printed report of the same Projected ATM Cash Needs data is available by clicking the Preview Report button at the top of the display.

262 There is also a Cash Order Worksheet Report available via a button on the top of the screen. This report lists all active terminals for which the Monitor Cash box is checked, much of the same information on the ATM Cash Needs screen, and additional information such as replenishment cycle data and the system's next proposed order amount. This worksheet can be useful for both review and planning.

263 Cash Replenishments are considered to take place at the beginning of a day, the middle of the day, or the end of the day, depending on the user's choice. Deposits to the ATM are applied before withdrawals. This only affects the ATM cash balances for swaps. Cash adds are not affected. This will have some affect on the Cash Needs/Forecasting because the ATM balance will be somewhat lower at the end of the day for Swaps. Cash Cost interest calculations are not affected. Only posted orders are considered when computing when an ATM will run out of cash. However, on drill down to the cash chart, all orders on file will show regardless of whether they have been posted.

264 The Cash Summary screen and the Projected Cash Needs screen described above alert the user to additional cash needed at ATMs. The cash ordering process described here allows the user to order cash from appropriate sources to replenish cash in the ATMs. The Cash Order form looks like this:

265 The Cash Orders button on the Main Menu displays the Cash Orders screen. This screen lists all cash orders on file sorted by the Order ID. Each Cash Order is comprised of order header information that applies to the entire order, and order detail information where each line pertains to one ATM. One cash order can be for many ATMs but must be to one and only one cash source (e.g. bank) and one customer.

266 Order header information is the following:

Field	Description
Order ID	User defined ID to uniquely identify this order.
From	Order originator – usually the usersr company
To	Organization with whom the cash order is being placed
Order Amount	Total amount of the detail lines of the order. This number is checked against the total of the actual line items before the order can be released.
Status	User defined order status code. An order in the “Released” status cannot be changed.
Confirmation	Response confirmation code from the Organization with whom the cash order is being placed
Order Date	Date the order was placed
Customer	The customer for whom the cash is being ordered and who will be charged interest
Source of Cash	The cash account from which the cash will be withdrawn
Instructions	Special Instructions for this cash order.

(see tab also)

267 Order detail lines on the order detail tab indicate for which ATMs cash is being ordered, what amount and in what denominations. The fields in the Cash Order detail lines are as follows:

Cash Order Detail Tab Field	Description
Terminal ID	Select the desired terminal from the drop-down list.
Location	The location of the terminal will be automatically filled in when the terminal is selected
Charge Date	Date from which interest is to be charged on this ATM order amount
Pickup Date	Date the cash is to be picked up by the armored carrier
Need Date	Date the cash is needed at the ATM
Amount Ordered	Filled in automatically from standard ordering information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made. {The order amount for a de-install Action should be 0.}
Action	R for Replenishment; A for adjustment amount; D for de-install. Defaults to Replenishment
Add or Swap	Filled in automatically from standard ordering information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made.
5s	Filled in automatically from standard ordering information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made.
10s	Filled in automatically from standard ordering information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made.
20s	Filled in automatically from standard ordering information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made.
50s	Filled in automatically from standard ordering

	information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made.
100s	Filled in automatically from standard ordering information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made.
Armored Car/Cash Delivery Service	Filled in automatically from standard ordering information in the ATM record if present. May be changed if desired. If not available from the ATM record, an entry must be made.

268 In the system, a Cash Order consists of one or more ATM Cash Order lines and has a status of either posted or not posted. Cash orders that are posted are locked to further edits while orders that are not posted are considered works in progress and may be edited.

269 There are two ways to generate a new Cash Order:

270 An order can be added in the Cash Orders screen by pressing the “Add New Order” button. This action will generate a blank order that can be completed; or -

271 The system can also generate a “proposed” or temporary order when the “Proposed New Cash Order” button is pressed. This order can be edited but remains temporary and will not be saved unless the word “Proposed” in the Order ID field is replaced with a unique Order ID designation before the screen is closed. The ATM Cash Order lines that are included in the order are based on the cash needs of each ATM terminal at the time the process is run. [Note: closing the Cash Order Proposal screen does not post an order. An order must be posted from the Cash Orders screen].

272 There are two sections to a Cash Order. The first section, located at the top of the screen, contains general information relating to the order such as Order ID, Order Date, etc. This “Header” section has several required fields and verifications built into it. (e.g., the Order ID field must be completed and does not allow duplicates).

273 The second section of a Cash Order contains the “Body” of the order. In this section, all ATMs requiring cash loads are listed line-by-line. This section also has several required fields and verifications. Each line is checked as it is entered into the system. If any required fields are omitted, an error message is displayed and the line is not added to the Cash Order.

274 The system will also fill in appropriate information pertaining to an order where possible. (e.g., for each new ATM Cash Order line, it is assumed that the order is for a replenishment. Therefore, an “R” is entered into the “Actn” field automatically.)

275 In addition, when a terminal is selected, the system will supply any defaults that have been entered in the ATM setup screens. (e.g., if an armored car has been designated in the ATM setup screen, then it will be filled in on the ATM Cash Order line.) The system also fills in an amount for the “Amount Ordered” and number of bills. The figures that are placed in these fields are based on the following:

276 If the “Propose Order Using” calculation has been set to “standard” or is blank on the ATM Cash Management tab:

277 If data has been provided for both the standard amount and number of bills, the system will fill in the appropriate data.

278 If no data has been provided for either the standard amount or number of bills, the system will place \$0s in the “Amount Ordered” and bill fields.

279 If the “Propose Order Using” calculation has been set to “computed” on the ATM Cash Management tab:

280 If data has not been entered into “Days To Order” and “Days to Pad” under the “Computed Order Section”, the system will place \$0s in the “Amount Ordered” and bill fields.

281 If the “Computed Order Section” has been filled in, the system will calculate the “Amount Ordered” and:

282 where only one “bill” has been designated (i.e. only 20s), the system will calculate the appropriate number of bills for the computed amount.

283 where more than one “bill” has been designated (i.e. 10s, 20s and 50s), the system will place \$0s in each of the bill fields.

284 where no “bills” have been designated, the system will place \$0s in each of the bill fields.

285 The data that the system places in a Cash Order can be changed as long as an order has not been posted. If the amount is changed, the system will recalculate the number of bills. Note: this feature only works when the ATM has been setup with one standard bill type. Once an Order has been posted it is locked from any further changes. Once a Cash Order is complete and published to others, it should be posted.

286 It is important to “Post” cash orders when they are ready to be issued because the posting process performs a final series of checks to ensure that the order is complete and in balance. The following is a list of the verifications that the system makes:

287 The order has not been already posted.

288 The order has an “Order Date”.

289 The order has a “Source of Cash (Account)”.

290 The order has no ATM Cash Order lines with an amount ordered of \$0 and an “Action” code of “R”.

291 The order has at least one “Charge Date”.

292 Each ATM Cash Order line must have an “Armored Car/Cash Delivery Service” designated.

293 Each ATM Cash Order line must have a “Need Date”.

294 The total bills on each ATM Cash Order line must equal the “Amount Ordered” for that line.

295 A “Total Amount” has been entered in the “Header” section and it matches the “Total Amount Order” from the sum of the ATM Cash Order lines.

296 If there are any problems encountered with the verification process, the order is not posted and a message is displayed describing the error.

297 If there were no problems during the posting process, the order is posted and locked. When an order is posted, the following takes place:

298 The system posts each ATM Cash Order line to the appropriate source of cash account.

299 The system issues a “memo post” of pending delivery records to cash tracking.

300 These last two processes do not occur until an order is posted.

301 New orders entered into the database are in an “Unposted” state and are considered open batches until Posted. Cash Orders must be “Posted” to

302 have them appear as a withdrawal against the Source of Cash account,

303 have pending deliveries posted to the individual ATMs,

304 be available for subsequent cash deliveries (loads), and

305 have the individual order lines appear on the Daily Transactions form for each ATM in the order.

306 A red banner will appear in the Cash Order header if the Order has not been posted. The users may add, change and delete information from the Cash Order as long as it has not been posted.

307 To Post a Cash Order, click the Post Order button in the form header. In order to have a successful post, there must be valid entries in the Order ID, Order Date, Order Amount, Charge Date and Source Of Cash fields. Further, the Order Amount in the header must match the total of the Order Detail lines. Posting an order “lights up” the Delivery tab on the Cash Order form.

308 Once a Cash Order has been posted, the banner in the form header will reflect that status and the order may not be posted again. Further, once posted, the order amount for each ATM is considered “in-transit” to the ATM and interest is charged on the amount to the ATM from the Charge Date. This timing and interest expense is reflected on the ATM Daily Transaction Statistics – Cash Tracking form.

309 Clicking the “Unposted Orders” button in the Cash Order form header will reduce the display to only those Cash Orders that are unposted, so that they may be located and processed more easily.

310 Cash Orders with no associated terminal cash load (delivery) can be edited.

Editing The Detail Line of A Cash Order

311 To edit the detail line of a cash order, click the edit button located on the line. The following screen will be displayed:

312 Any changes to the detail line can be made directly to this screen. Once all changes have been made, click the “Save Changes” button. The system will analyze the changes. If any errors are encountered (e.g., amount ordered does not match number of bills), the system will report the error and the changes will not be saved. If no errors are found the changes are saved to the order. Note: If the amount ordered has changed, the system will automatically adjust the total amount of the order.

313 To remove a terminal from a cash order, click the “Delete” button. A message will be displayed asking for confirmation. If “Yes” is selected, the terminal will be deleted. If “No” is selected, the terminal is not deleted.

314 To leave form without saving changes, click the “Cancel” button. The form will close and no changes will be saved.

315 To edit the main information of a cash order, click the edit button located in the top section of the cash order screen. The following screen will be displayed:

316 Changes to a Cash Order can be made directly to this screen, with the exception of fields with a gray background. Once all changes have been made, click the “Save Changes” button. The system will analyze the changes. If any errors are encountered, the system will report the error and the changes will not be saved. If no errors are found the changes are saved to the order. Note: The total amount of an order cannot be changed. However, the amount will be adjusted by the system if changes are made to the amount of an order detail line.

317 To leave form without saving changes, click the “Cancel” button. The form will close and no changes will be saved.

318 Cash order delivery information on the delivery detail tab reflects any deliveries recorded for individual cash order lines. These fields may not be updated on this screen – only via the separate cash delivery screens.

319 The fields in the Cash Order Delivery Detail tab are as follows:

Cash Order Delivery Detail Tab Field	Description
Terminal ID	From the order detail tab
Location	From the order detail tab
Amount Ordered	From the order detail tab
Armored Car/Cash Delivery Service	From the order detail tab
Exp Delivery	Expected delivery date
Delivery Date	Blank if delivery has not yet been made for this ATM cash order line. If an entry is present, the date the delivery was made.
Cash Counted	Blank if delivery has not yet been made for this ATM cash order line. If an entry is present, the amount of cash counted as present in the ATM before any additions
Cash Loaded	Blank if delivery has not yet been made for this ATM cash order line. If an entry is present, the amount of cash added to or swapped into the ATM.
Status	Status of delivery
Actn	Action for delivery
Add or Swap	From the order detail tab

Cash Retrnd	Blank if delivery has not yet been made for this ATM cash order line. If an entry is present, the amount of cash swapped out of the ATM or returned for any other reason (e.g. would not fit).
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320 To enter a new cash order, click the Add Icon button at the top of the screen, and proceed to enter order header and detail information.

321 If the user wishes, the system will prepare a suggested new cash order for the users. Click the “Proposed New Cash Order” button at the top of the screen and the system will create a new cash order with order lines for each ATM projected to run out of cash in the next 10 days and for which an outstanding cash order is not already on file. The users may add to, delete lines from, or edit the proposed lines for this suggested cash order and save it under an Order ID of the user's own if the users wish. If the users close the suggested cash order without saving it under an Order ID of the user's own, it is not saved.

322 After creating a new cash order, the users may wish to print a copy of the order and fax it to the cash source for processing. A button labeled “Cash Order Report” is available at the top right of the screen for this purpose. Remember, as cash deliveries are made and recorded in the Cash Loads portion of this module, certain delivery information is appended to the individual order lines to reflect those deliveries. The status of any cash order may be printed at any time and delivery information on file up to that point will be reflected on the printed report.

323 The Cash Loads button on the Main Menu displays the Post Cash Loads by Armored Car or Cash Source screen. This screen lists each armored car delivery service or cash supplier. For each such entity, all open ATM cash order lines (those order lines for which a delivery has not been made) are listed in sequence by date of order. The earliest order lines for each entity will be shown first, since these are the orders most likely to be delivered first.

324 In posting a cash load, normally the users will have some document in hand that confirms that the delivery was made on a certain date, and how the replenishment was handled. These documents should be kept in a file for later reference if needed.

325 Cash Loads are usually posted by ATM Terminal ID. Click the Cash Loads button on the Main Menu. This screen gives access to all open ATM cash orders by Terminal ID. The combo box (down arrow) on the Terminal ID field will offer a list of open ATM cash orders from which to choose.

327 If the option button indicates “Skip Cash Order Match Rqmt – Show All Terminals,” then all Terminal IDs are available and no attempt is made to match the cash loads entered with open cash orders. This latter choice should only be used to load historical data into the database, since as a general rule cash orders should be under the control of The system first before cash loads are posted. Using this option, when the users select a Terminal ID, The system does not fill in an order amount. The users may then enter the same six fields described above, click “Post Cash Load” and The system will log the delivery into the daily transaction records and re-compute the ATM cash balances as indicated above. The users may then continue immediately with the next cash delivery entry, repeating until the users are done

329 If an amount is entered in the Cash Returned field, then an entry in the Deposit Account for Cash Returned must be made. The system Pro will enter a default account for the users if one has been provided in the ATM screens.

331 General Facts on Open ATM Cash Orders and Pending Cash Delivery Records

332 In the system, a Cash Order is comprised of any number of ATM Cash Order lines. The Cash Order posting process conducts many checks on the entire Cash Order, ensuring that it is complete and in balance, and then locks the order from further changes. Unposted Cash Orders are considered to be works in process that can be modified until posted. Once a Cash Order is complete and issued to other organizations, it should be posted.

333 Each ATM Cash Order line is an open ATM order for that ATM until a delivery is posted against it. Once a delivery is posted for the ATM Cash Order, it is considered a completed ATM order.

334 When the users post a Cash Order, The system adds a pending ATM delivery record to the database for each open ATM order, that is if the order line had not already been delivered and completed (this is possible because unposted cash orders will accept deliveries for their open ATM order lines). These pending ATM deliveries will NOT show for unposted Cash Orders

335 In order for this process to work properly, the Need Date (or Fill Date) is a required entry on each ATM order line for a successful post of the order.

336 On the Daily Statistics Screen tabs, the pending cash deliveries will show an status indicator field of “*P*” in a blue color if they are pending for a future date, and an indicator field of “*OD*” in a red color if the expected delivery date has passed (overdue deliveries). The ATM Cash Order Fill Date (Need Date) field is used as the assumed date of the pending cash delivery.

337 After a Recalc (e.g. from a daily import) the pending deliveries and status indicators will also show on the Cash Tracking tab. Two fields are now displayed on the Cash Tracking Tab, the estimated cash left in the ATM with confirmed deliveries, and the estimated cash left including any overdue pending deliveries. (No amount is assumed to be returned from the delivery, e.g. for swaps).

338 The Cash Delivery Screen Terminal ID combo box shows all open ATM cash orders, whether they have a pending cash delivery record or not.

339 The Cash Loads Overdue screen shows all overdue cash deliveries, whether they have a pending cash delivery record or not.

340 When posting an actual cash delivery, the pending cash delivery is deleted and the information from the actual delivery replaces it. All cash balances are then updated.

341 The pending cash order information is NOT available to change on the Cash Load Changes screen as it represents open ATM orders for cash, and not confirmed deliveries.

342 The Cash Needs Screen and Report include overdue delivery amounts in the Estimated ATM Balance and show separately any scheduled future loads. This better identifies which ATMs need cash the soonest.

343 The overdue delivery status field is reset in the once-a-day startup, changing any pending deliveries whose dates have passed to overdue status.

344 Each cash load is treated as happening at the beginning of the day. As a result, the ATM balance is an estimated balance because the actual load could have occurred anytime during the day and the system doesn't know how many transactions during the day occurred prior to or after the actual load.

345 Estimated ATM Balances:

346 For an Add,

347 the cash counted adjusts the cash in the ATM

348 (the cash counted is taken over any potentially different amount

349 in the ATM Count field)

350 For a Swap,

351 the cash added resets the balance in the ATM

Ending Cash Liability:

For an Add,

352 if the Cash Counted and ATM Counts were supplied,

353 the over/short amount is calculated as the cash counted – the ATM count

354 the ending cash liability = the previous day's ending liability

355 - today's withdrawals

356 + any new cash charged today

357 - any actual cash returned

358 + the over/short amount

359 if both the Cash Counted and ATM Counts were not supplied,

360 (there is not enough info to calculate an over or short)

361 the ending cash liability = the previous day's ending liability

362 - today's withdrawals

363 + any new cash charged today

364 - any actual cash returned

For a Swap,

365 the ending cash liability = the previous day's ending liability

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366 - today's withdrawals

367 + any new cash charged today

368 - the actual cash returned

369 To change load information on cash loads already posted, click the Change Load Info button on the Cash Loads screen:

370 All cash loads on file are listed in order by Terminal ID. Find the terminal owning the load the users wish to change. Enter only the changes necessary in the fields at the top of the screen and click the Post Changes button. The system will make the necessary changes and update all ATM and cash account balances.

371 The Cash Loads Overdue button in the header of the Cash Load screen displays all cash orders that have not been delivered and are past their expected delivery date. The list may also be printed from the same screen. The printed report may be used as a worksheet to track the missing or overdue cash loads.

372 The following table lists the screen reports available from the Cash Management and how to display them:

Screen Report	Form	Purpose and Notes
Cash Summary	Cash Management: Cash Summary button	Cash history, current status and projections for an ATM
Cash Needs	Cash Management: Cash Needs button	Computations of cash needs and accompanying open cash orders for all ATMs
Cash Orders	Cash Management: Cash Orders button	Catalog of all cash orders on file, with optional line item delivery status

373 The following table lists the printed reports available from the Cash Management and how to produce them:

Report	Form	Purpose and Notes
Cash Summary	Cash Management: Cash Summary: Report	Cash history, current status and projections for an ATM
Cash Needs	Cash Management: Cash Needs: Preview Report	Computations of cash needs and accompanying open cash orders for all ATMs

Cash Order	Cash Management: Cash Orders: Cash Order Rpt.	Documentation of each cash order
Cash Order Status	Cash Management: Cash Orders: Cash Order Status Rpt.	Documentation of each cash order and delivery status of each order line
ATM Cash Flow Tracking Sheet	ATM Daily Transaction Statistics: Cash Tracking Report Tab and the Printed Reports Form	Provides detailed daily cash flow for a terminal for a month, including withdrawals by settlement day, cash orders, cash loads, over and shorts, cash liability and interest charges
ATM Group Cash Consolidation by Terminal	ATM Group Form and Printed Reports Form: Group Cash Flow by Terminal Button	Lists each ATM in a Group and for any period the opening cash liability, withdrawals by settlement day, cash orders, cash loads, ending liability and interest charges during the period
ATM Group Cash Consolidation by Date	ATM Group Form and Printed Reports Form: Group Cash Flow by Date Button	Lists each day in a period the summary for all ATMs in a Group, listing the total opening cash liability, withdrawals by settlement day, cash orders, cash loads, ending liability and interest charges during the period

374 The Event Management module supports the tracking of a variety of events such as supply orders, service orders, insurance claims, litigation proceedings and the like. The event types are user-defined and are defined in the System Configuration code tables.

375 The Supply Item form presents the detail of a supply item master file. Each item in the file contains the following fields:

Field	Description
Part Number	Part number
Item Name	Unique item name
Status	User defined status code table. (Set up in System Configuration.)
Class	

Our Cost	The user's purchase cost
Price	The user's price to the customer
Note	Memo field for notes pertaining to the item

376 To add an item to the master list, use the last line of the list (the one with an * as the record selector) to enter the new information. An item can be deleted from the list as long as it is not used on any Supply Orders. To delete an item from the file, click on the record selector of the desired record and press the Delete key.

377 The Supply Report button provides an alphabetical listing of all items on file.

378 Supply Orders are orders of items to be sent to an ATM site or business partner, and potentially billed to a customer. Supply Orders contain an order header, followed by detail lines for each item on order. The Supply Order form looks like this:

379 The supply order form is equipped with a Search Criteria box. This box allows the user to search by "ATM" or "Status". When the user chooses an ATM from the drop-down menu or a type of status, all supply orders meeting that criteria will be displayed. The "filtered" records that met the criteria can be viewed by using the navigation buttons located at the bottom of the screen. The user can also return to the default view of all records by clicking the "Show All" button.

380 The Search Criteria box also has a feature that allows the user to view a report based on the criteria selected. By clicking the "Criteria Report", a user can view and print a report of the currently displayed records. For example, to print a report of all "Open" supply orders, click "Open" from Status drop-down and then click "Criteria Report". If no criteria has been selected, the "Criteria Report" will display all records currently in the system.

381 The following fields comprise the header information in the Supply Order:

Field	Description
ATM Terminal ID	Selection of the ATM for this Supply Order
ATM Location	(Alternatively) Selection of the ATM Location for this Supply Order
ATM Address	(Alternatively) Selection of the ATM Address for this Supply Order
ATM Surcharge	Displays the terminal's surcharge transaction amount.

Bill To Partner ID	Selection of the ID of the Partner to Bill for this Supply Order
Bill To Partner Address	(Alternatively) Selection of the Address of the Partner to Bill for this Supply Order
Ship To Partner ID	Selection of the ID of the Partner to Ship this Supply Order
Ship To Partner Address	(Alternatively) Selection of the Address of the Partner to Ship this Supply Order
Status	Selection from the user defined table
Date Opened	Date the Supply Order was opened
Date Completed	Date the Supply Order was completed
Date Shipped	Date the Supply Order was shipped
Taken By	Selection from the user name table
Contact	Name of contact for supply order
Shipped By	Selection from the user name table
Shipping Method	Selection from the user defined table
Carrier	Selection from the user defined table
Payment Method	Selection from the user defined table
P.O. Number	PO number for supply order
Contact Phone	Telephone number of supply order contact
Mfg/Model	Manufacturer/Model for terminal
Subtotal Amount	Total of the extended price (quantity times price) of all order lines. System computation.
Tax	Tax amount – entered by user
Shipping and Handling Cost	Shipping and handling cost – entered by user.
Total Order Cost	Total of the Subtotal amount, tax and shipping and handling. Computed by the system

Supply Order Detail Lines

The following fields comprise the order lines of a Supply Order:

Field	Description
Line Number	A line number to identify and sequence the display of items on order
Part Number	Selection from the items by Part Number
Item Name	Selection from the items available to sell
Quantity	Quantity of the item on this line to order

Price	The users price to the customer (the price cannot be changed on this form)
Cost	Quantity time price. [Computed by the System.]

382 To add a new order, click the add button located at the top of the form. A blank supply order form will be displayed. There are several drop down boxes located in the “ATM”, “Bill To” and “Ship To” sections of the form to assist the users in choosing appropriately. If no information is entered into the “Bill To” and “Ship To” sections of the form, the system will use the ATM’s Location once a terminal is chosen. [Note: the “Bill To” and “Ship To” sections of the form involve Partners. Therefore, for the default to work, the ATM terminal must also be listed as a Partner.]

383 The header information should be filled in as completely as possible. Note: if the “Bill To” and the “Ship To” information is the same, the users may leave the “Ship To” blank. The users must complete the “header” part of the form prior to entering the details of the order in the “Order Detail” section. Once the header information has been completed, the users can begin to enter the order details.

384 A Supply Order may contain as many order lines may as needed. To add a line to a Supply Order, type an entry on the next available line at the end of the order. As the users enter information into the order details section of the form, the system will calculate totals based on the information that was entered into “Supply Items” (described earlier in this section.) To delete a line from an order, click the record selector to the left of the desired line, then press the Delete key.

385 Once the order form has been completed, the order can be viewed and printed by pressing the “Print Supply Order” button located at the top of the form. This will only print the order that is currently on display. If the users need to print another order, the users must first display that order.

386 Supply orders cannot be deleted from the system. If the users wish to “remove” an order from the system, the order can be marked with a “void” status.

387 Event Management allows the opening of a ticket to track various events such as ownership changes, bank account changes, insurance issues, installation steps, litigation matters and the like. The event types to be tracked are user defined in the System Configuration.

388 The following fields comprise the header information of an Event:

Field	Description
Event ID	Unique system assigned number for this Event
Event Type	Selection from the user defined table
Status	Selection from the user defined table
Problem Type	Selection from the user defined table
Date Opened	Date the ticket for the Event was opened
Opened By	User that opened Event
Crew Assigned	Selection from the user name table
Customer Service Rep (CSR) Assigned	Selection from the user name table
Schedule Date	Date the event work is scheduled to start
Date Closed	Date the ticket for the Event was closed
Incident #	Incident number assigned to Event
P.O. Number	P.O. number assigned to Event
Estimated Charge	Estimated charge
Final Charge	Final charge
Work Done	Selection from the user defined table

ATM Information (Optional)	The Event may or may not have an ATM associated with it. If an ATM is selected for the Event, these fields provide information about the ATM. The ATM related fields cannot be changed on this form.
Partner Information (Optional)	The Event may or may not have a Partner associated with it. If a Partner is selected for the Event, these fields provide information about the Partner. The Partner related fields cannot be changed on this form.
Event Description	Description of the purpose of this Event

389 The Event header information is followed by a series of notes. Any number of notes can be associated with an Event. The notes are kept by the system in reverse chronological order, with the most recent note showing at the top of the list. To add a new note, go to the end of list of notes and make an entry in the next available line.

390 There are restrictions on the editing of past Event notes. When a user tries to edit an older note, the system checks his or her security level. If the user has a security level of 0 or 1, edits are allowed. All users with a security level that is greater than 1 are not allowed to change older event notes.

391 Notes Fields:

Name	Location	Description
Date	Tab 8	The activity date for the note (e.g., the date the ATM experienced problems)
Type	Tab 8	The type or category of note
Next Contact	Tab 8	The date scheduled for the next contact
Added	Tab 8	The date the note was added to the system
Last Change	Tab 8	The date the note was last updated or changed
By	Tab 8	The user who is logged into the system at the time the note is entered
Notes	Tab 8	A description of the reason for the note

392 The zoom button is available in the note section of the Events Module:

393 To use this feature, click anywhere inside the note to be viewed and then click the zoom button. The note will be opened in a separate form to provide the user with a better view:

394 Changes and updates to notes can be made in full view and will take effect when the form is closed. All restrictions on the editing of past notes also apply to the full view of a note.

395 When an event type is designated as "Litigation Matter", the system adds another section to the Event Management Form. This section is called "Damages Calculation". It uses historic data and ATM related data to provide the user with a damage cost estimate. This section is only visible when an event is a Litigation Matter:

396 Damages Fields:

Name	Description
Yr/Mo	Identifies the year and month.
Txns	The number of total transactions per month

Vended	The total amount of withdrawals for the month
Revenue	The total revenue from all sources for the month
Expenses	The total expenses from all sources for the month
Profit	The net profit contribution for the month
Total Profit (Lifetime)	The total profit contribution from the contract start to date
Average Profit/Month	The average profit contribution per month
Contract Months Remaining	The number of months remaining on the customer contract
Damages Calculation	The average profit contribution times the number of months remaining on the contract

397 The print options for “Litigation” type events includes a feature that when a Litigation event is displayed and the “Print Event” button is pressed, a prompt is displayed with the following print options:

398 Current Litigation Event: generates a litigation report for the currently displayed event

399 All Litigation Events By Number: generates a litigation report for all open litigation events and sorts the report by Event ID

400 All Litigation Events By Location: generates a litigation report for all open litigation events and sorts the report by Location

401 A “flag” has been added to the upper right side of the Event form. If the current event is not a litigation event but the involved ATM has an open litigation, a red box with the word “Litigation” is displayed.

402 The system has two locations from which a new event may be generated. The first is through the Event form. The second is through the “ATMs With No Transactions” form (described later in this section).

403 To add a new order from the Event form, click the add button located at the top of the form. A blank event order form will be displayed. Default data of today’s date and status of “Open” are displayed. These defaults may be changed as necessary.

404 There are several combo boxes located on the form to assist the users in entering the data. The status, event type, CSR, and Crew boxes draw information that has been set up in System Configuration while the ATM and Partner related data is derived from the ATM and Partner screens respectively. The event form should be filled in as completely as possible.

405 The event description is meant to hold the main reason why the event was generated. The notes section is a way of recording subsequent actions in response to that main event. Notes are entered on this form and displayed chronologically by the last note entered. The system is also equipped with a “tickler” process. If a future date is entered into the system under “Next Contact”, the system can display a reminder to the user about that date.

406 New notes may be added to an existing event at any time. To add a new note, click anywhere in the notes section of the form. Use the notes scroll bar to scroll down to the end of the notes. Following the last record, there is a blank note with an asterisk (*). A new note can be recorded in this blank area.

407 Deleting Notes: the system does not allow an existing note to be deleted. Once the users leave the “note” area, the note is recorded and cannot be deleted.

408 When the users first enter the event forms, all events in the database are listed. The event order form is equipped with a Search Criteria box. This box allows the user to search by ATM, by Event ID, or use an extended search form. When the user chooses an ATM or a Partner, all events relating to that ATM or Partner will be displayed. The “filtered” records that met the criteria can be viewed by using the navigation buttons located at the bottom of the screen. The user can also return to the default view of all records by clicking the “Show All” button.

409 The event form is also equipped with an extended search capability that is activated by pressing the binoculars button. When the binoculars button is pressed, the following search criteria form is opened:

410 This form is set up so that more than one item may be used as selection criteria at any time. When more than one field is selected, the system will search for any events that match all the selected criteria. (e.g., if the first criteria selected is “Open” under “Status” and the second is “NY” under “State”, the system will find all events that are open and related to an ATM located in New York.).

411 This form is also set up so that certain fields allow “Search Strings”. “Search Strings” are searches that allow wildcard characters in the search. (For a list of the wildcard characters, please refer to Section 2.5 of the manual).

412 To search using the Search Criteria form, choose the criteria by which the users would like the system to search by following the guidelines above. After the users have chosen the appropriate criteria, click the “Search” button. The system will close the Search Criteria form and display the form from which the users launched the search. This “launch” form will only display the records that met the criteria of the users search. Use the navigation buttons at the bottom of the form to move from record to record. The criteria of the search will be displayed in the “Criteria” field located at the top of the form. To cancel the search and once again display all records, click the “Show All”.

413 To print a report of the Search Criteria, choose the criteria for the search (described in detail previously). Once the criteria has been displayed, click the criteria report button and a report will be generated based on the current criteria.

414 To reset the criteria on the search criteria form, click the Reset button. All the fields on the form will return to blanks. The users may also cancel/close the search criteria form and no filter will be applied.

415 An event may involve an ATM, a Partner or both. To “attach” or relate an event to a particular ATM, choose the ATM from the Terminal ID, Location or Address combo boxes on the event form.

416 An event may involve an ATM, a Partner or both. To “attach” or relate an event to a particular Partner, choose the Partner from Partner combo box on the event form.

417 There are certain restrictions involving a users ability to edit event notes. Any user can edit a note on the day the note was created. However, only users with a security level of 0 or 1 can edit notes from previous days.

418 To print the current event, make sure the event is the current, displayed record and press the “print event” button at the top of the form. The system will display a preview report of the event. The user may then print the report.

419 To print an inactive report on a terminal, make sure an event that is related to the terminal is the current, displayed record and press the “Inactive Report” button at the top of the form. The system will display a preview report of the event. The user may then print the report.

420 The system has a feature that will assist the users in identifying any problems that may exist with specific ATMs. This feature provides the user with a list of terminals that were not included in an import file or were included but had zero withdrawals transactions listed. To access this feature, press the "ATMs With No Txns" button on the main menu. The users will be prompted to enter a range of dates for the search and then the system will display the following form:

421 The following are several areas on this form that may be of interest to the user:

422 The most recent date with WD transactions on file and the most recent date with any transactions on file. The average number of WD transactions on file for each terminal

423 If there are events already on file for the ATM (either Service Order events or other). To view the details on events already on file for the ATM, double-click on the "Yes".

424 This form also offers the user the option to generate a new event. To generate a new event from this screen, click on the button next to the terminal under "Open New Event". When this button is pressed the system will open the Events module and set up a new event for the ATM.

425 A user can call up the last note recorded for an ATM by clicking the button under the "Last ATM Note" column.

426 A preferred embodiment of the invention implementing the foregoing and other features of the invention described herein is written with the front-end business logic and graphical user interface implemented in the Microsoft Access database management system using Access queries, forms, reports and Visual Basic code, and the back-end integrated relational database implemented in either Microsoft Access or Microsoft SQL Server utilizing stored procedures. In order to take advantage of advanced client-server architectures where a portion of the application is installed once on the server, to allow connection to other database management systems such as SQL Server, and to enter the multi-user ASP Internet environment, the product may be re-written using a different set of development tools. Both the in-house version and the Internet version can co-exist.

427 The above described system provides the following features to address the key problem areas in operating and managing ATMs and scrip terminals:

428 It produces a comprehensive integrated relational database:

451 Calculating all monthly income and expense components.

452 Producing monthly statements for overall terminal performance and for each partner's interests.

453 It provides a full reporting system that:

454 Provides extensive management visibility into revenue and costs of terminal operations.

455 Maintains an unlimited history of terminal balances, cash orders, cash replenishments, and transaction withdrawals.

456 Provides performance analysis of armored car services.

457 Provides charts and reports of daily cash activities to better understand traffic patterns and profitability.

458 Ranks terminals by transaction rates, by transaction amounts and by profitability.

459 Produces accounting statements for all partners.

460 Produces reporting by any group of terminals (by branch, location, etc.).

461 A preferred embodiment of the invention runs on PCs using Windows95 or higher. If a user's office PCs are networked, the database of the present invention is sharable from all PCs in the network.

Improving Cash Management Information Flow:

462 Much of the information exchange today among ISOs, cash suppliers and armored car companies is still in inefficient hard copy form. An ISO prepares a cash order for a group of ATMs and faxes it to the cash supplier. The cash supplier then reenters the order in its own record keeping system, produces another form of the order, and faxes it to the armored car company as delivery instructions. For each cash delivery, the armored car company faxes an account of delivery to both the cash supplier and the ISO, who must manually enter it back into its own record keeping systems. A companion product to the present invention will be developed to replace this hard copy information exchange. The software will be enhanced to export the cash order from the ISO and import it into the cash supplier's database, to export the delivery instructions from the cash supplier and import them into the armored car company's database, and to export delivery results from the armored car company's database and import them into both the ISO's and cash supplier's database.

Managing Delivery of Non-Cash Products From ATMs:

463 The products and services available from ATM and scrip terminals machines are expanding beyond cash and cash chits to include stamps, phone cards, tickets and coupons. The present invention currently supports such extended operations.

Managing Services of All Card-Based Self Service Kiosks:

464 Kiosks issue items of value, some for a customer cost and some for free. Kiosks of all types are appearing in more and more locations. Any chargeable items issued by a kiosk can be supported in much the same manner as ATM machines. Even kiosks that issue free items likely require the computation of various fees and expenses such as site fees, maintenance fees and advertising income. The terms and accounting module of the present invention is already engineered to address this emerging market.

Managing the Maintenance Function of ATMs and Kiosks:

465 All ATMs, scrip terminals and self-service kiosks have working parts and need both regular and emergency maintenance. Maintenance contracts and service calls are an expensive component of terminal operations. A maintenance and work order system appears to be a needed add-on component of the present invention. The present invention is well suited to support and assist a maintenance system because the present invention can already determine from the daily imported processor transaction files the number of jams, mis-feeds, over or short dispenses, out-of-cash shutdowns, and the like occurring at a terminal, and alert the user of needed maintenance.

Managing "Real Time" Customer Support:

466 Operators of ATMs often receive inquiries and complaints from customers who didn't get all their money, or have some other objection. In order to respond, the operators need to view the actual individual processor transaction records which contain completion codes, reversal codes, denial codes, mis-feed information and other data. Since the processor transaction files are downloaded each day and accumulated by terminal into the system, these files are retained in an accessible form on the user's computer for analysis. A transaction viewer module may be used to give users rapid visibility to any transaction on a formatted screen, so that the inquiry can be addressed while a customer is still on the phone.

Managing Customer Disputes:

467 Even after viewing a questioned transaction and talking with the customer, the customer may still dispute the result. A "file" must be opened for the dispute, information

recorded and perhaps a variety of records researched and opinions or decisions reached. Temporary credits are sometimes issued and must be finalized or reversed. A dispute management system can be developed as an additional integrated component of the ATM management system.

Managing Interchange Fees:

468 Many banks issue credit or debit cards that may be used in ATMs worldwide subject to the cardholder paying the local ATM surcharge fee. In addition to the surcharge fee, the bank issuing the card is charged an interchange fee by the bank owning the ATM at which the card was used. At this time, banks appear to have no efficient means to analyze interchange fees so that they can determine, for example, which of their own cards are costing them the most money or where they are being used (geographically or kinds of establishments). The design of the present invention can be extended to optionally keep transactions at the cardholder level in addition to the terminal level, allowing extensive analysis of individual cardholder habits and patterns. Interchange fees also apply to scrip terminals. The additional module might open up a whole new market for card issuer cost control and user analysis.

469 The invention allows an opportunity to operate an ASP site that provides an Internet-based web-enabled version of The system, capturing ATM transactions, cash orders, cash replenishments and the like once for all parties concerned with the ATM. This opportunity arises from the fact that several users of the product may need to capture and analyze the same data. Consider the common example of an ISO renting its cash from a bank. Both the ISO and the bank are interested in the operations of the ATM, the ISO for cash ordering and all income and expense items, and the bank because it must keep track of its own cash in the ATM. They both download the same daily activity file from the processor, and they both track cash orders and replenishments. Additionally, experience has proven that two separate databases attempting to keep track of the same information seldom have exactly the same information.

470 An ASP site establishes one large scale database into which the processor transaction files, the cash ordering activities, the armored car replenishment activities, and all contractual terms and conditions will be managed for the benefit of all interested parties. With proper security individual users will only see and/or update information for which they are

authorized. This development also places the present invention in the position of being a "Third-Party Data Broker," a potentially commanding position in this industry.

471 The ASP site has attractive to the smaller deployers of ATMs as well as deployers who do not care to or cannot afford to acquire their own in-house version of the software.

472 The ASP approach would have the benefit of reducing business costs for all parties involved, and still improve data timeliness and accuracy. Further, and most importantly, in this line of business the present invention involves custody of a potentially massive database that can be sanitized and sold as marketing research data to an unlimited number of customers, as well as be the base of a premium-priced consulting service.

473 Selected features and benefits of the most recent release:

Feature	Benefit
Terminals and Transaction Activity Module:	
ATM fields	Allows the definition of additional terminal types, merchant share information and how to apply cash loads
ATM Wizard	Leads user through the addition of new ATMs, prompting for required and preferred information
ATM bank account information	Documents the bank account numbers used for withdrawal, surcharge and interchange deposits
Prevention of closing terminals with cash balances	Ensures the integrity of certain consolidated statements
Processor import file screen streamlined	Only the user's processor names appear, eliminating the full list of available processors previously displayed
Processor file capture summary report now printed	Many users do not print the optional detailed processor import file capture report. A one page summary is now printed in all cases, documenting the totals of the capture process
ATM Group screen revised	Easier access to group level information
Terms and Accounting Module:	
Group level terms supported	Dramatically reduces the number of terms lines required, as group level terms apply to all terminals in the group. Also, significantly reduces work to change terms
Income and expense allocations supported	Both computed and manually entered amounts can be allocated automatically by several different methods to all terminals in a group
Table names verified when entered on terms lines	Eliminates chance of misspelling a table name. Also, a hot key is provided to view table information while working in the terms screen

TOP SECRET

Summary capability in terms lines	Allows a single reference that adds together the amounts of a set of terms lines, easing the ability to pay based on the net total of several lines
Catalog of report distribution cycles	New ability to catalog the reports sent to partners, including how and on what schedule they are sent.

Further Partner fields	Allows the definition of payment methods, bank account types, interest information, and new memo capabilities
Further profit report for an ATM Group	Allows the comparison of profit contributions among ATM groups
Further ability to print statements for all members of a Partner Group	Packages reports by partner group so that a designated partner receives a package of the reports for each individual partner in the group
Cash Management Module:	
Ability to make changes to posted Cash Orders	Avoids need to make adjustments to posted orders via additional orders. Also, includes the ability to add and delete order lines to posted orders
Ability to make changes to posted Cash Loads (Replenishments)	Allows changes to any field associated with a posted Cash Load. Also, includes the ability to delete a posted Cash Load, returning the load to a memo posted open order status.
Assistance in building new Cash Orders	For all new terminal cash order lines, the courier pickup date and the fill date are now supplied, assisting in building the order
Capabilities in computing the effect of cash loads	Cash loads may be treated as happening at begin of day, mid day or end of day, by terminal if desired, to more closely approximate the end of day cash balance in a terminal
Event Management Module:	
New Event fields	Allows documentation of problem type and work done, expanding the capabilities of analyzing event attributes
Open Insurance Indicator added	Indicates when viewing an event for any terminal, whether there is an insurance event open for the same terminal.
"24 hour" monitoring screen	The ATMs with No Txns screen eliminates any ATMs from view that have an open litigation or insurance event, so that they do not mix with the monitoring function
System-wide Features:	
Search boxes added to several screens	Allows easier and quicker lookups of information
Customization of report formats	Ability to toggle on or off any data column of four different reports that are frequently sent to ISO, sub-ISOs, dealers, merchants and the like. The reports can now contain only the information that the users want others to see

Ability to e-mail reports	Ability to attach any system report to an e-mail and launch the e-mail client (e.g. MS Outlook)
system-wide monthly close capability	Allows a monthly close effect where no changes are permitted to statistical or accounting figures prior to the close date, protecting the integrity of numbers passed to other systems, such as general ledger and accounts payable
Error Handling	Manages several additional error conditions avoiding the need to cancel routines or answer system level questions
installation routine	An installation wizard minimizes the work to add the ATM management system to additional computers
Small, fast client program	Fast execution speed and elimination of non-essential toolbars from screens

474 The initial display for the “ATM Groups” shows a single group, the terminals that are members of that group, and terms/allocation information associated with the group. There is a group selection combo box located on the top of the form for easy group navigation. A full list of groups can be viewed by choosing the “All Groups – Screen Report” option and clicking “Execute”.

475 Many users are unsure of what information is necessary when adding a new terminal to the database. An ATM Setup wizard has been added to the ATM screen that leads the user through a complete set of setup screens for each ATM. Clicking the “Add” button on the ATM Terminals screen will launch this wizard:

476 This ATM wizard takes a user through a series of questions and on-screen instructions that assist in the setting up of a new terminal. All required fields are on the first panel of the Wizard.

Cash Settlement Tab On ATM Screen Revised:

477 The Cash Settlement tab on the ATM Screen includes two sections:

Top Section:

478 The purpose of this section is to store and track information relating to the bank accounts to which interchange fees, surcharge fees, and withdrawal amounts are deposited.

Bottom Section:

479 The bottom section of the screen identifies which (if any) Settlement Float table an ATM uses. Settlement Float tables identify when withdrawn cash and surcharge amounts

settle back to the users bank accounts. This display has been changed so that it now shows the settlement day of the week for each daily processor transaction file.

480 The following fields also appear on the ATM screen:

Terminal Type (located on the main screen)

481 This combo box provides the user with a way to categorize terminals (e.g., ATM, POS, etc.). This is a user-defined table of values. The types of terminals available to the system can be set up in System Configuration (Code Tables tab, “ATM Terminal Types” button).

Est Mrch Share (located on the “Information” tab)

482 An estimated merchant share of the surcharge.

483 Apply Load (located on the “Replnsmnt” tab)

484 How cash loads should be treated by the system: BOD (beginning of day), EOD (end of day), or MID (middle of day). If this field is left blank, the system-wide setting will be used (located in System Configuration on the “Parameters” tab). If the System Configuration setting is blank, the default is BOD. Prior to this release all cash loads were treated as happening at the beginning of the processor’s settlement day. Note: the ATM setting takes precedence over the system setting. (For further details, please refer to the Cash Management section of this bulletin).

485 The system will not allow the status of an ATM to be changed to “Closed” if the ATM has a cash balance on file. Only ATMs with a zero cash balance in the ATM cash field can be designated as “Closed”. Additional status codes such as “Pending” or “Closed Pending” can be used until the balance has been removed from the terminal. This new feature keeps ATMs from being closed and disappearing from certain forms and reports, when they still have cash in them. Note: An ATM can be closed if it has a zero ATM cash balance, but still has an accumulated over or short condition resulting in a non-zero remaining cash liability.

486 The navigation on the ATM Daily Transaction Statistics and ATM Monthly Transactions Totals screens have been improved. Combo box selections are now available to allow easier access to terminal information.

487 Re the “Import” screen. A Combo box selection has replaced the radio buttons that list the system’s import types. In addition, the system has been updated so that it will print import capture and import posting errors. The error report will print even if the reporting options for these two reports have been turned off. In addition, a totals line for transaction counts and

amounts will always be printed for each file captured, so that the totals can be retained, referenced, and compared to any processor reports provided.

488 Under the structure of the system's terms and accounting , in addition to defining terms at the individual ATM level, terms can now be defined at the ATM Group level, and all ATMs in the group will inherit those terms lines. This feature dramatically reduces the number of terms lines required in many instances, and additionally reduces the time and effort to change terms lines.

489 Terms can now be defined in one of four separate categories:

ATM Specific Terms:

490 ATM Specific Terms are terms set up for an individual ATM on the ATM Terms screen.

491 The ATM Terms screen has three tabs. The first tab displays each ATM's specific terms and any (new) group level terms (noted with a "G"). This tab is for display purposes only and cannot be edited. The second tab shows all the ATM Specific terms that have been set up for the terminal. This is the tab where ATM Specific terms can be added or edited. The final tab displays all the ATM's new group related terms. The third tab cannot be edited. However, the group terms definition section can be accessed by double-clicking on the appropriate group name on the tab.

492 The navigation on the ATM Terms screen has a combo box selection to allow easier access to terminal information.

Group Level Terms:

493 Group Terms are terms lines set up using ATM Groups, and apply to each ATM in the group in the same manner as if they were set up at the individual ATM level for each ATM in the group. The "Group Terms" tab is located on ATM Groups form (accessed through the main menu):

494 New group level terms can be added directly to this tab. As existing group terms are edited and new lines added for a group, the change is immediately applied to all terminals within the group. In addition, as new terminals are added to existing groups, all the lines that have been set up for that group automatically become part of the new ATM's terms.

495 Group Terms function in the same way as ATM Specific Terms. They have the same data requirements (e.g., unique line numbers, required fields, etc.). The system simply

takes the term line and applies it to all ATMs in the group. For example, suppose a computed line, L100+L110, is set up at the group level. Each ATM in the group will have an accounting display that includes a sum of that ATM's line 100 and line 110 for each applicable month.

496 Group Terms are added immediately to each ATM in a group. However, monthly accounting is not automatically generated. Like ATM Specific Terms, Group Terms require a computation process. This can be done for all levels of terms and groups by clicking the "Recompute All Monthly Accounting" button on the Calculations menu. To see accounting results on individual ATMs in a group, the "Show Acctng" button on an ATM's Terms screen or the "Recalc Acctng" on an ATM's Accounting screen can be pressed.

Group Allocation Terms:

497 Group Allocation Terms are group terms where a total is generated for the ATMs in the group, and then distributed back to the ATMs in the group based on a selected allocation method. The allocation methods currently supported by the system are as follows: a) total withdrawal, interchange or surcharge amounts, b) volume of several types of transactions, or c) even distribution of an amount to all ATMs in the group.

498 Group Allocation Terms are set up in the same way as other group terms. A Group Allocation Term is defined when an allocation method is chosen for that term from the combo box under the "Allocation Method" column:

499 Group Allocation Terms are different from Simple Group Terms. Terms involving allocations calculate a total for the ATMs in the group, and then distribute that total back to each ATM on a selected pro-rata basis.

500 Group Allocation Terms can be set up in the same way as ATM Specific Terms and Simple Group Terms. The only exception is that a group total cannot be generated for a Base Type of "Comptd" or "Prime". For example, suppose a distributor is paid based on the total transactions for a group of ATMs each month, rather than the transactions of each ATM individually. This computation requires the ATM management system to add up the total transactions for a group of ATMs, and generate an expense amount that is dependent on cost brackets for different volumes in a table. Once the expense amount is generated, the amount needs to be distributed back to each ATM in the group based on their pro-rata share of the transactions. A terms line to handle this situation, would be developed as follows:

501 Step 1: Create a table that matches the volume needs of the contract for total transactions. e.g.:

Low Limit	High Limit	Value
1	20000	0.50
20001	40000	0.60
40001	80000	0.70
80001	99999	0.80

502 Step 2: Add a group level terms line (e.g., line number, expense vs. income, partner name, minimum amount, etc.). In this instance, Base would be "TtlTxn", Frequency would be "Table", Equation would be the name of the group table created in Step 1 and the allocation method would be "TtlTxn".

503 Group Allocation Terms are added immediately to each ATM in a group. However, monthly accounting is not automatically generated. Like ATM Specific Terms and Simple Group Terms, Group Allocation Terms require a computation. (Re)calculations for all terms at all levels is done by clicking the "Recompute All Monthly Accounting" button on the Calculations menu. To perform the calculation for an individual group, click the "Calculate and Distribute Allocation" button located on the "Group Terms" tab.

504 The "Group Allocations" tab shows the detail of how a total charge was distributed back to each ATM in the group. The tab displays the total amount computed in the terms line for each month:

505 To view a breakdown of how a month's Computed Amount was distributed among the ATMs in the group, double-click on the group terms line. The following pop-up screen will be displayed showing each ATM in the group and its dollar and percentage share of the total amount:

Group Allocation Terms – Manual Entries:

506 Group Allocation Terms – Manual Entries are group allocations where an amount is entered by the user for a month and then distributed by the system to all ATMs in the group. As an example, a manual entry is required when a bill is received that must be allocated in some fashion to each ATM in a group. Manual Entries are setup like other group terms. The only

difference is that "Manual" is selected as a Base and text such as "To Be Determined" is entered in the Equation field. When monthly accounting calculations for Group Allocation Terms are computed (described above), the system generates a zero amount for manual terms for each applicable month's accounting statement:

507 This acts as a placeholder for the actual amount. The amount can be entered by the user at the group level, and subsequently distributed to the ATMs in the group. When a manual amount has been entered, it can be distributed to all the ATMs in the system by clicking the "Distribute Manual Entries" button located on the Group Allocations tab. [Note: entered manual amounts are also distributed/re-distributed to ATMs through the Group Allocation Terms monthly calculations as described above.]

508 Since the proper application of group terms is dependent on ATM Groups, it is important to keep the ATMs in the groups up-to-date. ATMs should not be deleted from groups. Instead, start and end dates should be used to manage a terminal's participation in a group. Note that the start and end date of an ATM's participation in a group is in addition to the start and end date of the terms line itself. Both come into play in determining if and when to apply a group term line to a particular ATM.

509 As a user adds or edits a terms line, the line is checked to verify it meets certain criteria (i.e., unique line number). A new check is added to this validation. When a table is used in a terms line, the system now verifies that the table exists. A hot key combination (Control/R) allows immediate lookup of table names for use in these lines.

510 By placing a colon between two line number references in the terms line equation column (e.g., L3:L10), the System will add up the values for all the line numbers between the colon references. For example, L2:L5 will result in L2 + L3 + L4 + L5. Any line numbers that do not exist or are not active will be ignored.

511 A "Statement" tab on the Partner Screen can be used to assist the user in documenting the system reports/statements that are sent to the Partner, including the frequency and method by which they are sent. In this release, this information is for documentation purposes only, to know from one month to the next which reports the users have decided to send to individual partners. However, it forms the base on which more automatic report producing services will be provided in the future.

512 The following fields have been added to the Partner screen:

Payment Method (located on the "Information" tab)

513 This combo box provides the user with a way to designate whether the Partner uses an ACH or check payment method.

Bank Account Type (located on the "Bank Accounts" tab)

514 This combo box provides the user with a way to designate the type of bank account (e.g., DDA account).

Compute Interest (located on the "Bank Accounts" tab)

515 This check box provides the user with a way to designate if the account is in an interest bearing account.

Interest Rate From Prime (located on the "Bank Accounts" tab)

516 This field provides the user with a way to designate the interest rate for the account.

Partner Memo (located on the "Notes" tab)

517 Similar to the ATM memo field, this Partner new memo field appears on certain forms and reports a sort of constant visible note. It is used to indicate important information such as the hours of operation of the merchant store.

Copying of Terms Lines Revised:

518 The procedure that copies terms lines from another ATM includes any copied line numbers that already exist in the target ATM, but drops their line numbers. The user can fill in these line numbers after the copying is complete, or delete the lines, whichever is appropriate. Note: Terms lines must have unique line numbers or the system will not compute monthly accounting accurately.

519 The navigation on the ATM Accounting screen has a drop-down menu e to allow easier access to terminal information.

520 The Table screen includes an "Add" button.

Cash Order Needs Form and Report Now Available By ATM Group:

521 The Cash Order Needs screen and report prompt for a group name, so that only those non-closed ATMs for which the Monitor Cash check box is checked will be displayed. This allows easier replenishment needs analysis for an individual group of ATMs. The full list of ATMs can still be displayed by leaving the group name blank when prompted.

522 Another feature in the ATM management system is the ability to edit both the main and detail sections of posted Cash Orders. There is now an edit button located in both sections that will start the edit feature:

Editing the Detail Line of a Cash Order:

523 To edit the detail line of a cash order, click the edit button located on the line. The following screen will be displayed:

524 Any changes to the detail line can be made directly to this screen. Once all changes have been made, click the "Save Changes" button. The system will analyze the changes. If any errors are encountered (e.g., amount ordered does not match number of bills), the system will report the error and the changes will not be saved. If no errors are found the changes are saved to the order. Note: If the amount ordered has changed, the system will automatically adjust the total amount of the order.

525 To remove a terminal from a cash order, click the "Delete" button. A message will be displayed asking for confirmation. If "Yes" is selected, the terminal will be deleted and the total of the order updated. If "No" is selected, the terminal is not deleted.

526 To leave form without saving changes, click the "Cancel" button. The form will close and no changes will be saved.

Editing The Main Section of A Cash Order:

527 To edit the main information of a cash order, click the edit button located in the top section of the cash order screen. The following screen will be displayed:

528 Changes to a Cash Order can be made directly to this screen, with the exception of fields with a gray background. Once all changes have been made, click the "Save Changes" button. The system will analyze the changes. If any errors are encountered, the system will report the error and the changes will not be saved. If no errors are found the changes are saved to the order. Note: The total amount of an order cannot be changed on this screen. However, the amount will be adjusted by the system if changes are made to the amount of an order detail line, or if detail lines are added or deleted.

529 To leave form without saving changes, click the "Cancel" button. The form will close and no changes will be saved.

530 Estimate Of Need Date/Pickup Date Now Placed On Cash Order Detail Line:

531 When a terminal is selected for a cash order, the system fills in a series of defaults (e.g., amount ordered, number of bills, etc.). An estimated Need (or Fill) Date and Pickup Date are provided for the defaults that will be supplied.

532 Feature Allowing Changes to Cash Loads Has Been Expanded:

533 Cash loads can be changed on the Cash Loads By ATM screen (accessed from the Cash Loads Screen). Changing a cash load now is done in a way that is similar to changing a cash order. The Cash Loads By ATM screen has an Edit button.

534 Changes to a Cash Load can be made directly to this screen, with the exception of fields with a gray background. Once all changes have been made, click the “Save Changes” button. The system will analyze the changes. If any errors are encountered, the system will report the error and the changes will not be saved. If no errors are found the changes are saved to the order.

535 To leave form without saving changes, click the “Cancel” button. The form will close and no changes will be saved.

536 To delete a cash load, click the “Delete” button. A message will be displayed asking for confirmation. If “Yes” is selected, the cash load will be deleted and the status of the load returned to pending status (it is then again considered an open, pending order for the ATM). If “No” is selected, the cash load is not deleted.

537 When posting a cash load, the system will check if the load date is within (plus or minus) three days of the need date. If the date is outside of this time frame, a warning message is displayed, with the option to return to the form and correct the date before posting i

538 It is possible to view the Partner Details for a Cash Account. When the Partner Name field is double-clicked, the system opens the Partner screen and displays the information for the Partner to which the account is related.

539 A cash load can be set by the user to be applied at the beginning of the processor settlement day, the middle of the processor settlement day, or the end of the processor settlement day. This feature affects the estimated cash balance used for cash forecasting purposes:

540 Beginning of Day (BOD): this feature applies all withdrawals for a processor settlement day as happening after any loads for that same day. This results in the lowest or “safest” estimated cash balance for the ATM.

541 End of Day (EOD): some processors offer the option of pushing all transactions after a load to the next day's settlement file. If the usersr processor does this, selection of EOD will allow a solid reconciliation in the ATM Management system reports with the processor reports.

542 Middle of Day (MID): the MID value assumes the load happened in the middle of the processor's business day and may be the best overall, system-wide choice for most users.

543 How a cash load is applied can be set on a system level or individual ATM level.

544 If the cash loads are applied in the same way for all or a majority of the ATMs, the system setting can be used. The system setting can be accessed through the "Parameters" tab in System Configuration. The "When to Apply Cash Load" combo box can be set to BOD (beginning of day), MID (middle of day) or EOD (end of day). The system level setting will be applied to all ATMs that have no individual setting.

545 If cash loads need to be applied uniquely for certain ATMs, the individual ATM setting can be used. The individual setting is located in the ATM Terminals screen on the "Replnsmnt" tab ("Apply Load"). The ATM's individual setting takes precedence over any system settings. (e.g., if the system is set to BOD and Terminal "Sample" is set to EOD, cash loads will be applied at the beginning of day for all ATMs except for "Sample." All cash loads for "Sample" will be applied at the end of the day.

Events Module

Event Management Tracking Improved:

546 Event Management has been expanded to include two new fields: Problem Type and Work Done. These are user-defined fields that can be used to categorize problems and work done. Both of these fields can be set up through System Configuration on the "Code Tables" tab.

"Open Insurance" Indicator Added To Events:

547 A "flag" is provided on the the Event form. If the current event is not an insurance event but the involved ATM has an open insurance event, a red box with the word "Open Insurance Event" is displayed.

ATM's With No Transactions Report Revised:

548 The screen report "ATM's With No Transactions Reported" does not include any terminals that already have open insurance or litigation events.

System Configuration

An "Accounting Cutoff Date" Feature Has Been Added To System:

549 It is possible to freeze or perform a close operation on prior months in the ATM management system. When used, this feature will not allow any recalculations, data entry or any other data revisions prior to a date set by the user. In this manner, statistics and amounts published in reports or passed to other accounting systems will not be allowed to change, and any attempt to add or change data to the system that would cause such a change will be refused. Any necessary adjustments can then be made in the current period.

550 The cutoff date is set in System Configuration on the Parameters tab. Any changes in the following areas will be checked to be sure they have no effect prior to the Accounting Cutoff Date:

Daily Import Transactions additions, deletions and changes

ATM Terms additions, deletions and changes

ATM Groups additions, deletions and changes

ATM Group Terms additions, deletions and changes

Cash Settlement Table additions, deletions and changes

Settlement Float Table additions, deletions and changes

Cash Order additions, deletions and changes

Cash Load additions, deletions and changes

Cash Transfer additions, deletions and changes

551 It is possible to customize four different printed reports that contain columns of statistical and income amount data, so that they only display the information that the users want.

The four reports are the:

ATM Daily Transaction Detail Report,

ATM Daily Activity Summary,

Partner ATM Txn Activity Statement, and the

Partner ATM Monthly Statement.

552 These four reports are commonly sent to others such as investors, ISOs, sub-ISOs, distributors, dealers, and merchants. In this release, additional columns of data have been added to these reports, and the ability to toggle on and off any of the columns the users wish. A new tab has been added to the system configuration screen to select which columns of data are to be

contained in each report when it is printed. Using the check boxes provided, the users may customize each report to appear the way the users want when it is printed.

553 The look of the Import Directories Screen provides the user with the code (placed in the Imp/Export ID/XID field of the Partner screen) for each processor.

554 The ATM Monthly Profit Comparison Report has been expanded to include the profit contribution for each of the last three months, in addition to the average of all months on file.

555 The partner accounting reports that are available at the individual partner level are available at the partner group level as well. Selecting one of the reports at the partner group level will print the report for each member of the partner group, eliminating the need to select each of the partners individually and print the report. This “package” of reports may be sent as a whole to one location (e.g. a sub-ISO to provide information about each of its sites), or this feature may be used as an easy method of printing reports for each member of the group and each report sent separately to the member locations.

556 The “ATM Monthly Profit Comparison by Group” report lists the average profit per month alphabetically by group including a count of ATMs for each group. The report is time sensitive to when an ATM starts and ends participating in a group.

557 It is to be understood that the above-described embodiments are simply illustrative of the principles of the invention. Various and other modifications and changes may be made by those skilled in the art which will embody the principles of the invention and fall within the spirit and scope thereof.